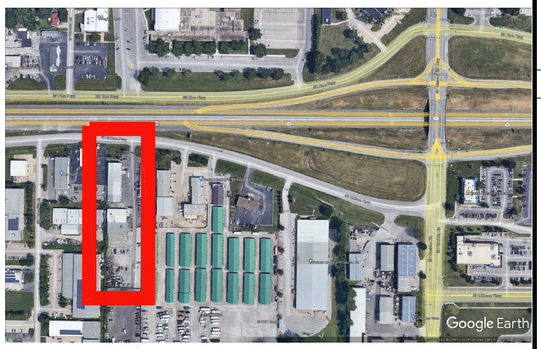
PROPOSED BUILDING FOR:

CRASH CHAMPIONS

451 SE OLDHAM PARKWAY LEE'S SUMMIT MISSOURI





LOCATION MAP 2
N.T.S.

A/C	AIR CONDITIONING
AC	ACCOUSTICAL
ACT	ACCOUSTICAL TILE
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATELY
ARCH	ARCHITECTURAL
ASPH	ASPHALT
BD	BOARD
B.F.F.	BELOW FINISHED FLOOR
BLDG	BUILDING
BRG	BEARING
BTU	BRITISH THERMAL UNIT
CCT	CIRCUIT
CFM	CUBIC FEET/MINUTE
CJ	CONTROL JOINT
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNDT	CONDUIT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOS
CT	CERAMIC TILE
CW	COLD WATER
DIA	DIAMETER
DIM	DIMENSION
DISC	DISCONNECT
DN	DOWN
DR	DOOR
DS	DOWNSPOUT
DTL	DETAIL
EA	EACH
EJ	EXPANSION JOINT
ELEC	ELECTRIC/ELECTRICAL
EMERG	EMERGENCY
EP	ELECTRICAL PANEL
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXH	EXHAUST
EXP	EXPANSION
FD	FLOOR DRAIN
FDN	FOUNDATION
FFE	FINISHED FLOOR ELEVATION
FLR	FLOOR
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FOOT
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GND	GROUND
GYP	GYPSUM
HB	HOSE BIBB
HDWR	HARDWARE
HORZ	HORIZONTAL
HP	HORSE POWER
HR	HOUR
HTG	HEATING
HTR	HEATER
HW	HOT WATER
ID	INSIDE DIAMETER
IN	INCHES
INSUL	INSULATION
JB	JUNCTION BOX
JT	JOINT
LAV	LAVATORY
MAX	MAXIMUM
MECH	MECHANICAL
MTL	METAL
MFG	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANIOUS
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
PL	PLATE
PLUMB	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PREFAB	PREFABRICATED
PSF	POUNDS/SQUARE FOOT
PSI	POUNDS/SQUARE INCH
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
R/A	RETURN AIR
RD	ROOF DRAIN
RCPT	RECEPTACLE
REC	RECESSED
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RTU	ROOF TOP UNIT
SCHED	SCHEDULE
SF	SQUARE FEET
SIM	SIMILAR
SPEC	SPECIFICATION
SPK	SPEAKER
STL	STEEL
STRUC	STRUCTURAL
TEMP	TEMPORARY
TYP	TYPICAL
UL	UNDERWRITER LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITIES
VEST	VESTIBULE
VTR	VENT THROUGH ROOF
W/	WITH
WC	WATER CLOSET
WD	WOOD
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD

ABBREVIATIONS 6

1. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK.
2. SUB-CONTRACTOR TO VERIFY FIELD CONDITIONS AND MEASUREMENTS, AND TO PROMPTLY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WITH PLANS.
3. REMOVE DEBRIS, RUBBISH, AND OTHER MATERIALS RESULTING FROM CONSTRUCTION OPERATIONS FROM THE BUILDING SITE. PROVIDE AN ON-SITE DUMPSTER FOR DISPOSAL OF DEMOLISHED AND RUINED MATERIALS.
4. UPON COMPLETION OF WORK, REMOVE TOOLS, EQUIPMENT, AND CONSTRUCTION DEBRIS FROM SITE. REMOVE PROTECTIONS AND LEAVE INTERIOR AREAS BROOM CLEAN
5. PROVIDE TEMPORARY BARRICADES AND OTHER FORMS OF PROTECTION AS REQUIRED TO PROTECT GENERAL PUBLIC FROM INJURY DUE TO CONSTRUCTION. PROVIDE PROTECTIVE MEASURES AS REQUIRED TO PROVIDE FREE AND SAFE PASSAGE OF OWNER'S PERSONNEL.
6. ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND INDUSTRY STANDARDS.
7. FRAMING SUBCONTRACTOR IS REQUIRED TO NOTIFY ARCHITECT FOR VERIFICATION & APPROVAL OF LAYOUT PRIOR TO PROCEEDING WITH FRAMING.
8. MAINTAIN EXISTING UTILITES INDICATED TO REMAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE DURING CONSTRUCTION
9. DISPOSE OF ALL DEBRIS TO APPROVED DUMP SITE.
10. ALL STRUCTURAL WOOD PANELS & WOOD BLOCKING TO BE FIRE TREATED.

GENERAL NOTES 5

NORTH ARROW

SECTION # / SECTION CUT / SHEET #

DETAIL # / DETAIL CUT / SHEET #

ELEVATION # / EXTERIOR/INTERIOR ELEVATION MARKER / SHEET #

WALL TYPE

ROOM NAME/ROOM NUMBER

DOOR NUMBER

WINDOW NUMBER

REVISION NUMBER / AREA REVISED

PROJECT LEGEND 4

general contractor:
ROSE CONSTRUCTION
P.O. Box 100
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913.782.0998
www.buildwithrose.com

architect:
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P.O. Box 100
Olathe, Kansas 66051
(P) 913.782.0777
(F) 913.782.0998
www.buildwithrose.com

civil engineer:
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1270 N. Winchester
Olathe, Kansas 66061
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(F) 913.393.1166
www.phelpsengineering.com

plumbing engineer
mechanical engineer
5BY5 ENGINEERS
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Kansas City, Missouri 64108
(P)913-777-4999
5by5eng.com

structural engineer:
BOB D. CAMPBELL & CO., INC.
4338 Belleview
Kansos City, Missouri 64111
(P) 816.531.4144
(F) 816.531.8572
www.bdc-engrs.com

PROJECT TEAM 3

DEFERRED SUBMITTALS:
FOLLOWING BUILDING COMPONETS SHALL BE SUBMITTED TO LEES SUMMIT FOR REVEIW AND APPROVAL PRIOR TO INSTALLATION
1. FIRE SPRINKLER SYSTEM
2. PRECAST CONCRETE
3. FIRE ALARM SYSTEM, W/O MANUAL PULL BOXES

NOTE:
MONUMENT SIGN & BUILDING SIGNAGE IS NOT IN PERMIT DOCUMENTS WILL BE SUBMITTED AS SEPARATE PERMIT(S)

SHEET INDEX

CIVIL:

S1	SITE SURVEY
C0	DEMOLITION PLAN
C1	SITE PLAN
C1.1	ENLARGED SITE PLAN
C1.2	ENLARGED SITE PLAN
C2	ENLARGED GRADING PLAN
C2.1	ENLARGED GRADING PLAN
C3	UTILITY PLAN
C4	EROSION CONTROL PLAN
C4.1	EROSION CONTROL DETAILS
C5	PAVEMENT DETAILS
C5.1	PAVEMENT DETAILS
C5.2	SANITARY & WATER DETAILS
LS-1	LANDSCAPE PLAN

ARCHITECTURAL:

CS	COVER SHEET
C1.0	CODE REVIEW
A1.0	SITE PLAN
A1.1	SITE PLAN PHASES
A2.0	FLOOR PLAN
A2.1	PHASED FLOOR PLANS
A2.2	ROOF PLAN
A3.0	BUILDING ELEVATIONS
A4.0	WALL SECTIONS
A4.1	WALL SECTIONS
A4.2	WALL SECTIONS
A4.3	WALL SECTIONS
A4.4	WALL SECTIONS
A5.0	SCHEDULES
A5.1	INTERIOR ELEVATIONS

STRUCTURAL:

S1	GENERAL NOTES FOUNDATION PLAN
S2	ROOF FRAMING PLAN & SECTIONS
S3	FOUNDATION SECTIONS

MP DESIGN:

M1.0	MECHANICAL PLANs
M2.0	MECHANICAL SCHEDULES
P1.0	PLUMBING PLANS
P1.1	PLUMBING ENLARGED PLANS
P2.0	PLUMBING SCHEDULES & DETAILS

ELECTRICAL DESIGN:

E1.0	ELECTRICAL POWER PLAN
E2.0	ELECTRICAL LIGHTING PLAN2
E3.0	ELECTRICAL DETAILS
E4.0	ELECTRICAL SCHEDULES
E4.1	ELECTRICAL SCHEDULES
ES1.0	ELECTRICAL SITE PLAN

SHEET INDEX 1

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Christopher R. Bell

STATE OF MISSOURI
CHRISTOPHER R. BELL
NUMBER A-6275
REGISTERED ARCHITECT

10-04-21

CHRISTOPHER R. BELL - ARCHITECT
MO # A-6275

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ARCHITECTS ■ PLANNERS
A Division of Rose Design Build
913-782-0777 FAX: 913-782-0998
P.O. BOX 100 OLATHE, KS 66051
MISSOURI STATE CERTIFICATE OF AUTHORITY # 2008034845
www.BuildWithRose.com

CRASH CHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

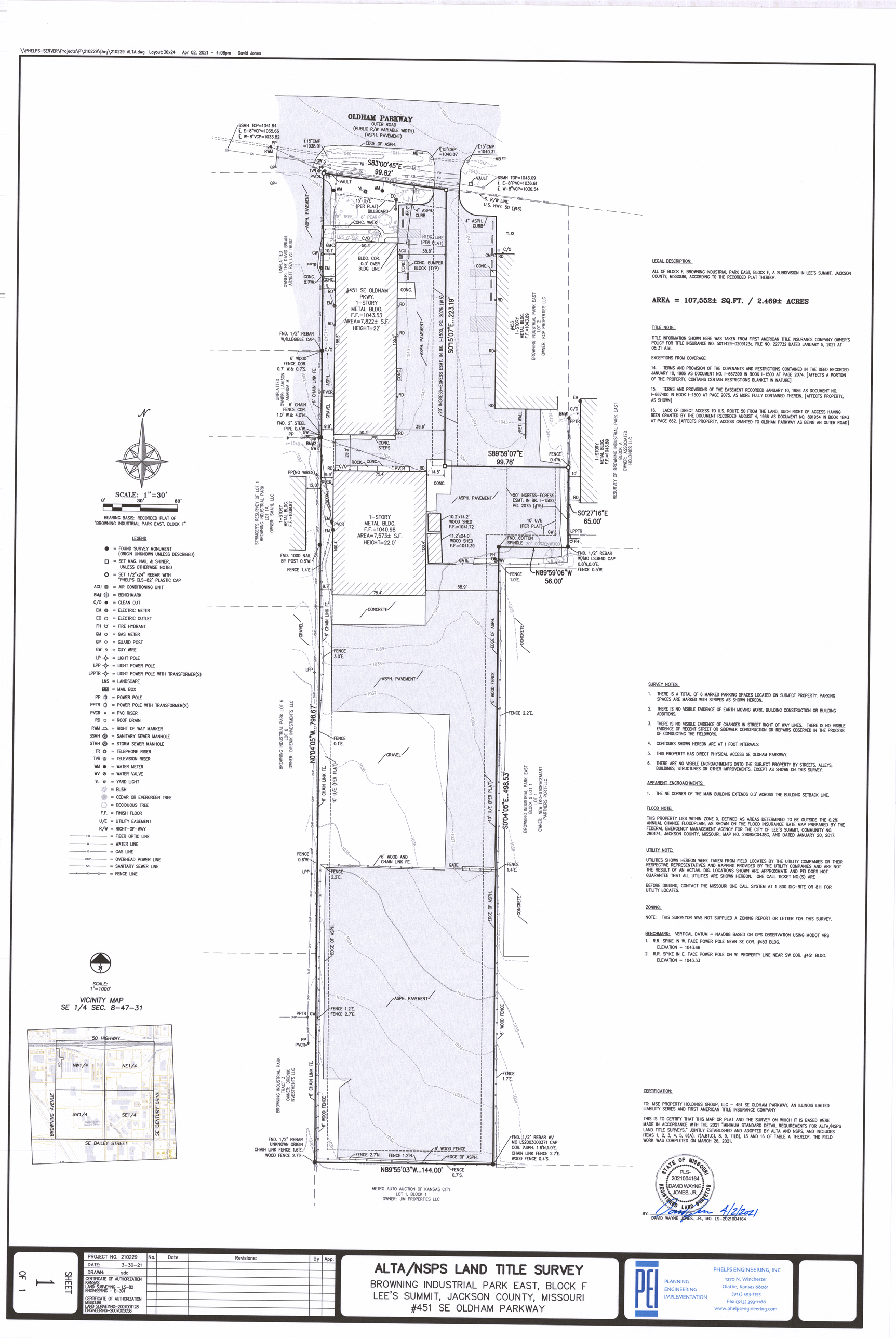
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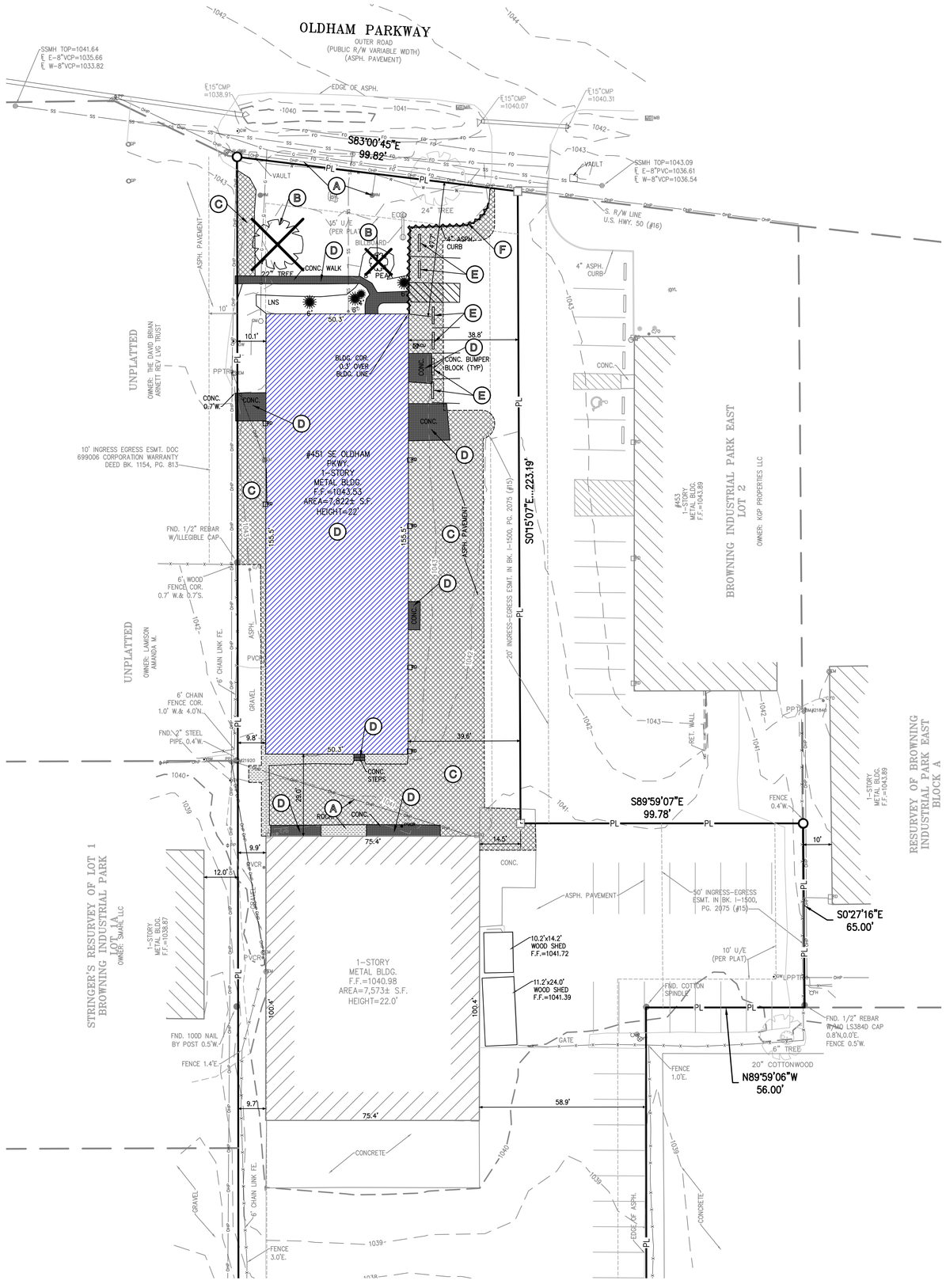
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DATE ISSUED: 10 / 04 / 21

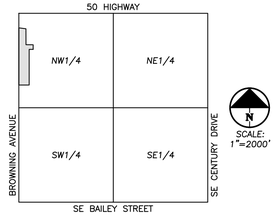
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CS

COVER SHEET

Oct. 22, 2021 - 12:00pm - USER ChrisB
T:\Rose\Drawings-Current\21009 Crash Champions Lee's Summit\Production\Planning & Zoning\Architectural\CS COVER SHEET.dwg
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OLDHAM PARKWAY
OUTER ROAD
(PUBLIC R/W VARIABLE WIDTH)
(ASPH. PAVEMENT)
S83°00'45"E
99.82'
S. R/W LINE
U.S. HWY. 50 (#16)
#451 SE OLDHAM PKWY.
1-STORY
METAL BLDG.
F.F.=1043.53
AREA=7,822± S.F.
HEIGHT=22'
S01°51'07"E...223.19'
S89°59'07"E
99.78'
S0°27'16"E
65.00'
N89°59'06"W
56.00'
N01°04'05"W...798.67'
S01°04'05"E...498.53'
N89°55'03"W...144.00'
1-STORY
METAL BLDG.
F.F.=1040.98
AREA=7,573± S.F.
HEIGHT=22.0'
#453
1-STORY
METAL BLDG.
F.F.=1038.67
#457
1-STORY
METAL BLDG.
F.F.=1040.86
#463
1-STORY
METAL BLDG.
F.F.=1040.86
#475
1-STORY
METAL BLDG.
F.F.=1040.86
#481
1-STORY
METAL BLDG.
F.F.=1040.86
#487
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METAL BLDG.
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METAL BLDG.
F.F.=1040.86
#541
1-STORY
METAL BLDG.
F.F.=1040.86
#545
1-STORY
METAL BLDG.
F.F.=1040.86





VICINITY MAP
SEC. 8-47-31

811
Know what's below.
Call before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

DEMOLITION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) ALL CURBS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL.

2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.

3. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.

4. CONTRACTOR MUST COORDINATE WITH OWNER PRIOR TO ANY CONSTRUCTION TO ESTABLISH CUSTOMER ACCESS AND TRAFFIC FLOW DURING ALL PHASES.

5. REFER TO THE BUILDING PLANS FOR SITE LIGHTING ELECTRICAL MODIFICATIONS (IF ANY) TO THE EXISTING SYSTEM.

DEMOLITION KEY NOTES:

(A) ALL UTILITIES SERVING STRUCTURES IMMEDIATELY SURROUNDING THE DEMOLITION BOUNDARY SHALL REMAIN IN SERVICE THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY DAMAGE TO SUCH UTILITIES. TYPICAL LOCATION.

(B) REMOVE EXISTING TREE (TYP).

(C) THE CONTRACTOR SHALL REMOVE EXISTING DRIVE ENTRANCE & EXISTING ASPHALT PARKING LOT. REMOVE EXISTING ASPHALT, CONCRETE, AND THE SUB-BASE GRAVEL TO THE NATURAL SOIL ELEVATION.

(D) THE CONTRACTOR SHALL REMOVE ALL PRE-EXISTING STRUCTURES, FOUNDATIONS, FOOTINGS, PIERS, WATER WELLS, SEPTIC TANKS, LATERAL LINES, BURIED DEBRIS, MISCELLANEOUS CONCRETE, ETC. WHICH MAY BE ENCOUNTERED DURING DEMOLITION ACTIVITIES. THE CONTRACTOR SHALL DISPOSE OF THESE MATERIALS IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES.

SHADED AREAS INDICATE MAIN STRUCTURES AND OUTBUILDINGS TO BE DEMOLISHED. IN ADDITION TO SHADED DEMOLITION AREAS, ALL MISCELLANEOUS CONCRETE, STONE STRUCTURES, OUTBUILDINGS, PRIVATE SIDEWALKS, HAND RAILINGS, RETAINING WALLS, SIGNS, PATIOS, FOUNDATION WALLS AND FOOTINGS ASSOCIATED WITH THE STRUCTURES SHALL BE REMOVED UNLESS OTHERWISE NOTED ON THE PLANS. TYPICAL LOCATION.

THE CONTRACTOR SHALL BE REQUIRED TO BACKFILL ALL EXCAVATIONS/DEPRESSIONS CREATED BY THE REMOVAL OF STRUCTURES, FOUNDATIONS, FOOTINGS, PAVING, SEPTIC TANKS, WELLS, PIPES, TREE ROOTS, DEBRIS AND UTILITY STRUCTURES, ETC. ALL EXCAVATIONS SHALL BE BACKFILLED TO EXISTING GROUND ELEVATIONS ON ALL SIDES OF THE EXCAVATION.

(E) THE CONTRACTOR SHALL REMOVE CONCRETE STOP BLOCKS.

(F) REMOVE EXISTING 4" ASPHALT CURB.

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- REMOVE EXISTING CURB & GUTTER
- EXISTING BUILDING TO BE REMOVED
- EXISTING ASPHALT PAVEMENT TO BE REMOVED
- EXISTING CONCRETE PAVEMENT/SIDEWALK TO BE REMOVED
- EXISTING GRAVEL TO BE REMOVED
- EXISTING TREE TO REMAIN
- REMOVE TREE
- BT — EXISTING BURIED TELEPHONE
- CATV — EXISTING CABLE TELEVISION LINE
- FO — EXISTING FIBER OPTIC LINE
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- BE — EXISTING BURIED ELECTRIC
- OHP — EXISTING OVERHEAD POWER LINE
- SS — EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING FIRE HYDRANT
- LP — EXISTING LIGHT POLE
- EXISTING CHAIN LINK FENCE



STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-2008B
11/10/21
PROFESSIONAL ENGINEER

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PLANNING
ENGINEERING
IMPLEMENTATION

DEMOLITION PLAN
CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

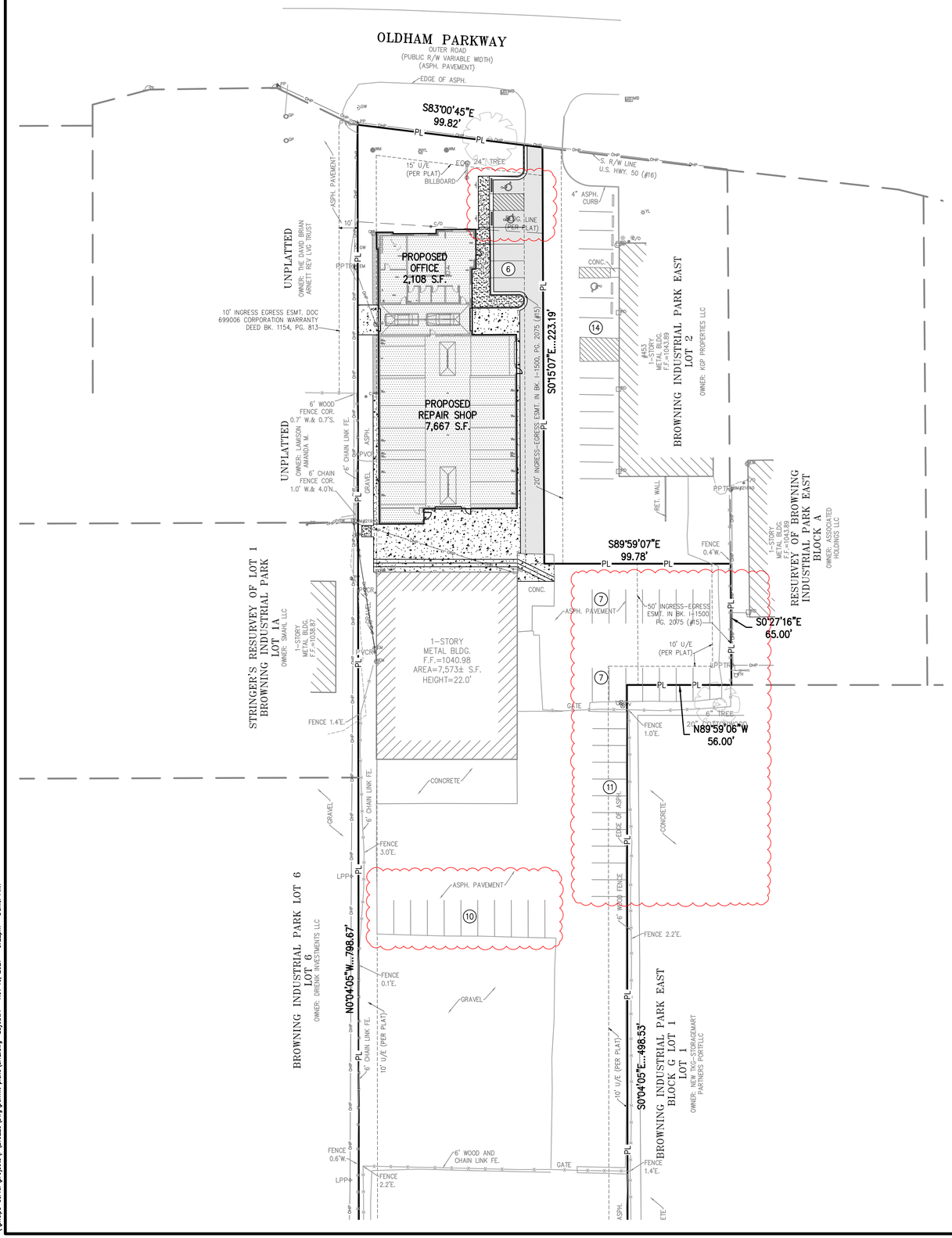
No.	Date	Revisions:	By	App.
1.	11-10-21	CITY REVIEW COMMENTS	SNH	DAF

PROJECT NO. 210229
DATE: 10-12-21
DRAWN: SNH
CHECKED: DAF
APPROVED: JDC

CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING - LS-82
CERTIFICATE OF AUTHORIZATION MISSOURI ENGINEERING - E-391
CERTIFICATE OF AUTHORIZATION LAND SURVEYING-2007001128
CERTIFICATE OF AUTHORIZATION ENGINEERING-2007005358

SHEET
C0

\\phelps-server\projects\P\210229\Dwg\permit plans\DEMO.dwg Layout:1 Nov 10, 2021 - 3:02pm Daniel Finn



811
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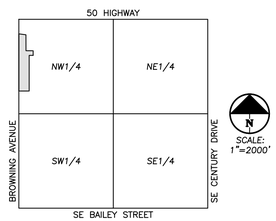
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BUILDING & LOT DATA

Site Area	107,552 S.F./2.47 Ac.
Zoning	PI (Planned Industrial)
Proposed Building No. of Stories	1 Story
Total Building S.F.	
Existing Building	7,573 S.F.
Proposed Office	2,108 S.F.
Proposed Repair Shop	7,667 S.F.
Total	17,348 S.F.
Floor Area Ratio (FAR)	0.1613

PARKING SUMMARY

Parking Required	
Automobile Service (3 per service bay, 11 service bays)	33 Spaces
Parking Provided	
Standard Parking Provided	39 Spaces
Handicap Accessible Parking Spaces Provided	2 Spaces
Total Parking Provided	41 Spaces



VICINITY MAP
SEC. 8-47-31

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- 6" CURB
- B/L — BUILDING SETBACK LINE
- P/S — PARKING SETBACK LINE
- L/S — LANDSCAPE SETBACK LINE
- PROPOSED BUILDING
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPOSED 2" ASPHALT MILL & OVERLAY
- ROCK STRIP



SCALE: 1"=20'
0' 20' 40'

SITE PLAN NOTES:

1. All construction materials and procedures on this project shall conform to the latest revision of the following governing requirements, incorporated herein by reference:
A) City ordinances & O.S.H.A. Regulations.
B) The City of Lee's Summit Technical Specifications and Municipal Code.
C) All construction shall follow the City of Lee's Summit Design and Construction Manual as adopted by Ordinance 5813. Where discrepancies exist between these plans and the Design and Construction Manual, the Design and Construction Manual shall prevail.

2. The contractor shall have one (1) signed copy of the plans (approved by the City) and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.

3. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City of Lee's Summit, Missouri, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits, bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.

4. The contractor is responsible for coordination of his and his sub-contractor's work. The contractor shall assume all responsibility for protecting and maintaining his work during the construction period and between the various trades/sub-contractors constructing the work.

5. The demolition and removal(or relocation) of existing pavement, curbs, structures, utilities, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state and federal regulations.

6. Contractor shall be responsible for all relocations, including but not limited to, all utilities, storm drainage, sanitary sewer services, signs, traffic signals & poles, etc. as required. All work shall be in accordance with governing authorities specifications and shall be approved by such. All cost shall be included in base bid.

7. All existing utilities indicated on the drawings are according to the best information available to the Engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All underground utilities shall be protected at the contractor's expense. All utilities, shown and unshown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.

8. The contractor will be responsible for all damage to existing utilities, pavement, fences, structures and other features not designated for removal. The contractor shall repair all damages at his expense.

9. The contractor shall verify the flow lines of all existing storm or sanitary sewer connections and utility crossings prior to the start of construction. Notify the engineer of any discrepancies.

10. SAFETY NOTICE TO CONTRACTOR: In accordance with generally accepted construction practices, the contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. Any construction observation by the engineer of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures, in, on or near the construction site.

11. All site concrete (curbs, pavements, sidewalks, etc.) shall meet kansas city materials metro board (kcmmb) mix design specifications for 4,000 p.s.i. air entrained concrete. APWA detail references are provided for all geometrical and other design information.

12. Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

SITE DIMENSION NOTES:

1. BUILDING TIES SHOWN ARE TO THE OUTSIDE FACE OF PROPOSED WALLS. THE SUBCONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR SPECIFIC DIMENSIONS AND LAYOUT INFORMATION FOR THE BUILDINGS.

2. ALL DIMENSIONS SHOWN FOR THE PARKING LOT AND CURBS ARE MEASURED FORM BACK OF CURB TO BACK OF CURB.

PAVEMENT MARKING AND SIGNAGE NOTES:

1. PARKING STALL MARKING STRIPES SHALL BE FOUR INCH (4") WIDE WHITE STRIPES. DIRECTIONAL ARROW AND HANDICAP STALL MARKINGS SHALL BE FURNISHED AT LOCATIONS SHOWN ON PLANS.

2. HANDICAP PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO ALL FEDERAL (AMERICANS WITH DISABILITIES ACT) AND STATE LAWS AND REGULATIONS.

3. TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

4. STOP SIGNS SHALL BE PROVIDED AT ALL LOCATIONS AS SHOWN ON PLANS AND SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". SIGNS SHALL BE 18" X 12", 18 GAUGE STEEL AND SHALL BE ENGINEER GRADE REFLECTIVE.

5. TRAFFIC CONTROL AND PAVEMENT MARKINGS SHALL BE PAINTED WITH A WHITE SHERWIN WILLIAMS S-W TRAFFIC MARKING SERIES B-29Y2 OR APPROVED EQUAL. THE PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. APPLY ON A CLEAN, DRY SURFACE AND AT A SURFACE TEMPERATURE OF NOT LESS THAN 70°F AND THE AMBIENT AIR TEMPERATURE SHALL NOT BE LESS THAN 60°F AND RISING. TWO COATS SHALL BE APPLIED.

LEGAL DESCRIPTION:

ALL OF BLOCK F, BROWNING INDUSTRIAL PARK EAST, BLOCK F, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEREOF.
AREA = 107,552± SQ.FT. / 2.469± ACRES

PRE-CONSTRUCTION MEETING NOTE:

THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200.

OIL-GAS WELLS:

ACCORDING TO THE MISSOURI DEPARTMENT OF NATURAL RESOURCES STATE OIL & GAS COUNCIL WELLS, LOCATED AT www.dnr.mo.gov/geology/geosrv/oilandgas.htm, THERE ARE NO OIL OR GAS WELLS ON THE PROPERTY SHOWN HEREON.

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29830
11/10/21
PROFESSIONAL ENGINEER

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1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
FAX (913) 393-1066
www.phelpsengineering.com

PLANNING
ENGINEERING
IMPLEMENTATION

SITE PLAN
CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

Revisions:	Date	No.	By	App.
CITY REVIEW COMMENTS	11-10-21	1.	SNH	DAF

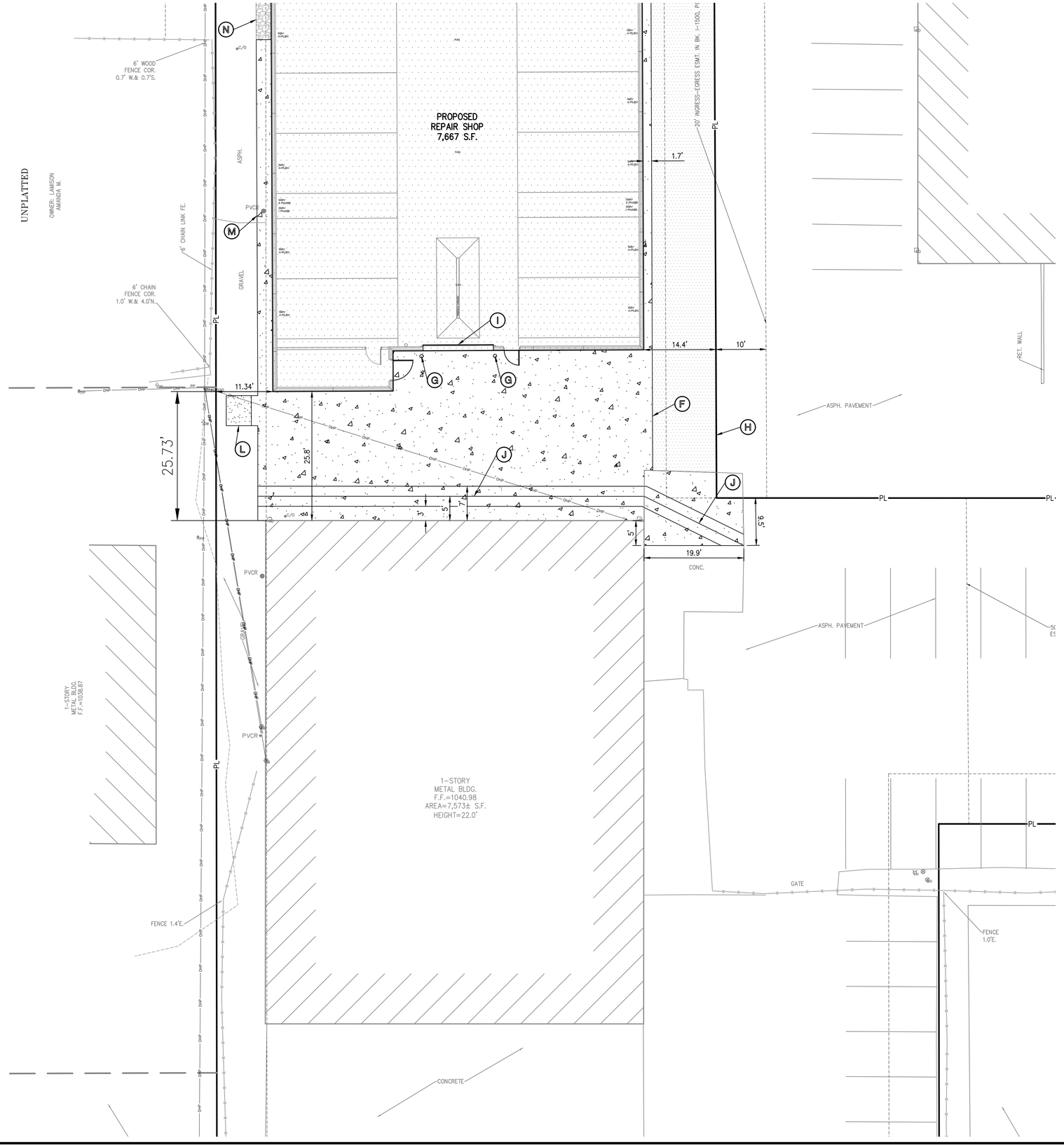
PROJECT NO. 210229
DATE:10-12-21
CHECKED: DAF
DRAWN:SNH
APPROVED: DJC

CERTIFICATE OF AUTHORIZATION
KANSAS ENGINEERING - LS-82
MISSOURI ENGINEERING - E-381

CERTIFICATE OF AUTHORIZATION
LAND SURVEYING-2007001128
ENGINEERING-2007002558

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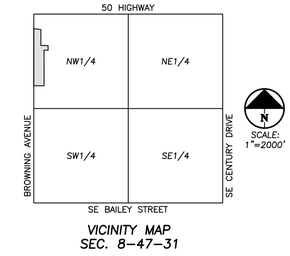


SITE KEY NOTES:

- (A) CONSTRUCT PRIVATE 2' TYPE "B" CONCRETE CURB & GUTTER (TYPICAL).
- (B) CONSTRUCT PRIVATE CONCRETE SIDEWALK (TYPICAL).
- (C) CONSTRUCT ACCESSIBLE PARKING STALL, STRIPING & SIGNAGE W/ LAYDOWN CURB AND CONC. WHEEL STOP PER STANDARD DETAIL..
- (D) INSTALL VAN ACCESSIBLE PARKING SIGN.
- (E) CONSTRUCT 6" MONOLITHIC CONCRETE CURB (TYPICAL).
- (F) INSTALL CONCRETE PAVEMENT.
- (G) INSTALL BOLLARDS (RE: ARCHITECT PLANS).
- (H) EDGE MILL & ASPHALT OVERLAY.
- (I) PROPOSED OVERHEAD DOOR (RE: ARCH PLANS).
- (J) INSTALL CONC. PILOT CHANNEL.
- (K) EX. SIGN TO REMAIN.
- (L) PROP. TRANSFORMER PAD (RE: UTILITY PLAN).
- (M) INSTALL 3' CONCRETE APRON.
- (N) INSTALL 3' ROCK STRIP.

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- 6" CURB
- B/L — BUILDING SETBACK LINE
- P/S — PARKING SETBACK LINE
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- PROPOSED BUILDING
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPOSED 2" ASPHALT MILL & OVERLAY
- ROCK STRIP



VICINITY MAP
SEC. 8-47-31

811 Know what's **below.** **Call** before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.



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PLANNING
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ENLARGED SITE PLAN

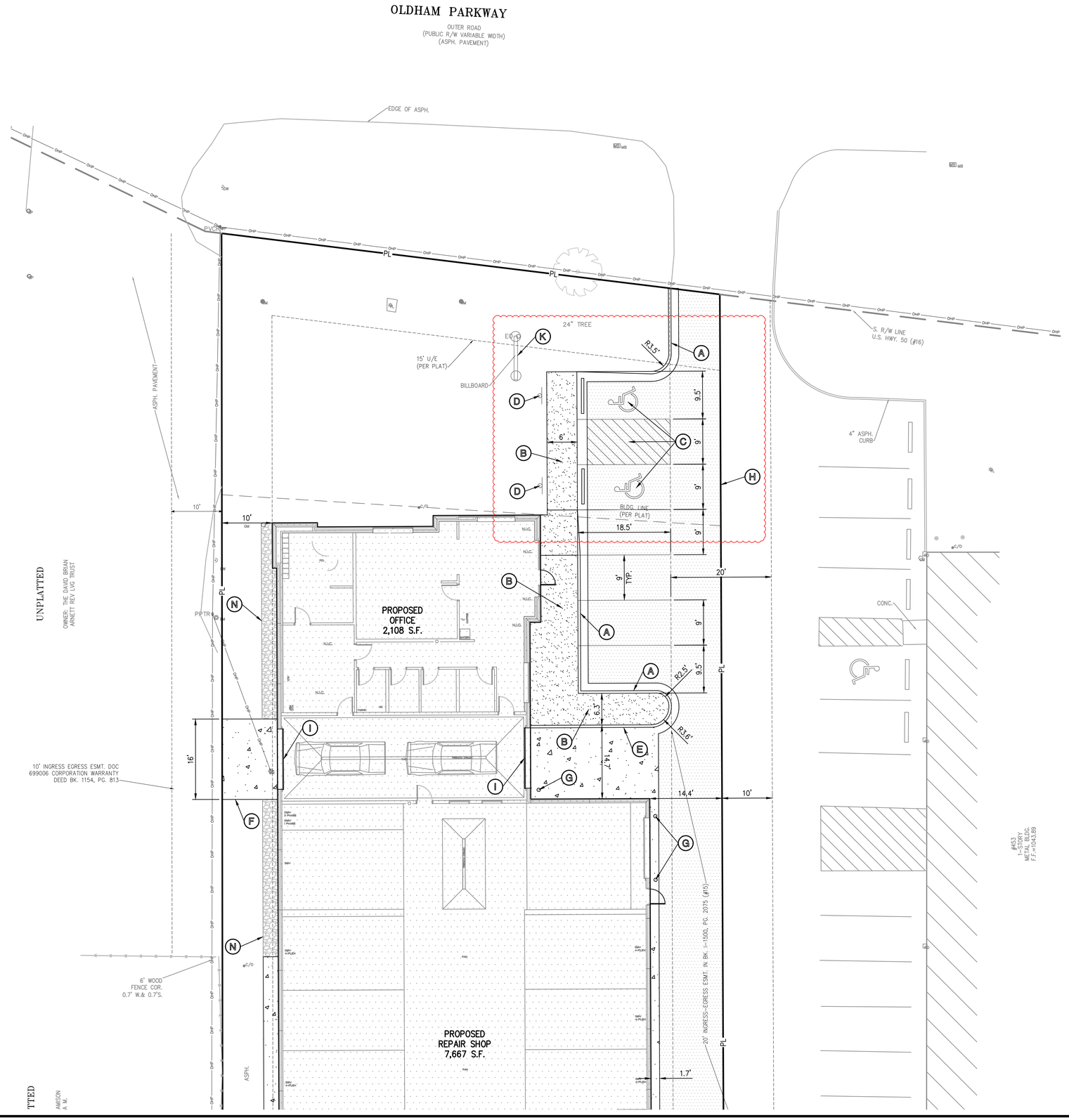
CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

No.	Date	Revisions:	By	App.
1.	11-10-21	CITY REVIEW COMMENTS	SNH	DAF

PROJECT NO. 210229
DATE: 10-12-21
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING - LS-82
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING-2007001128
ENGINEERING-2007005358

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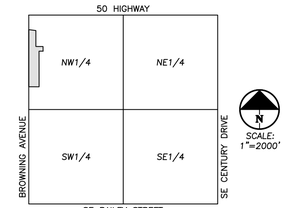


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VICINITY MAP
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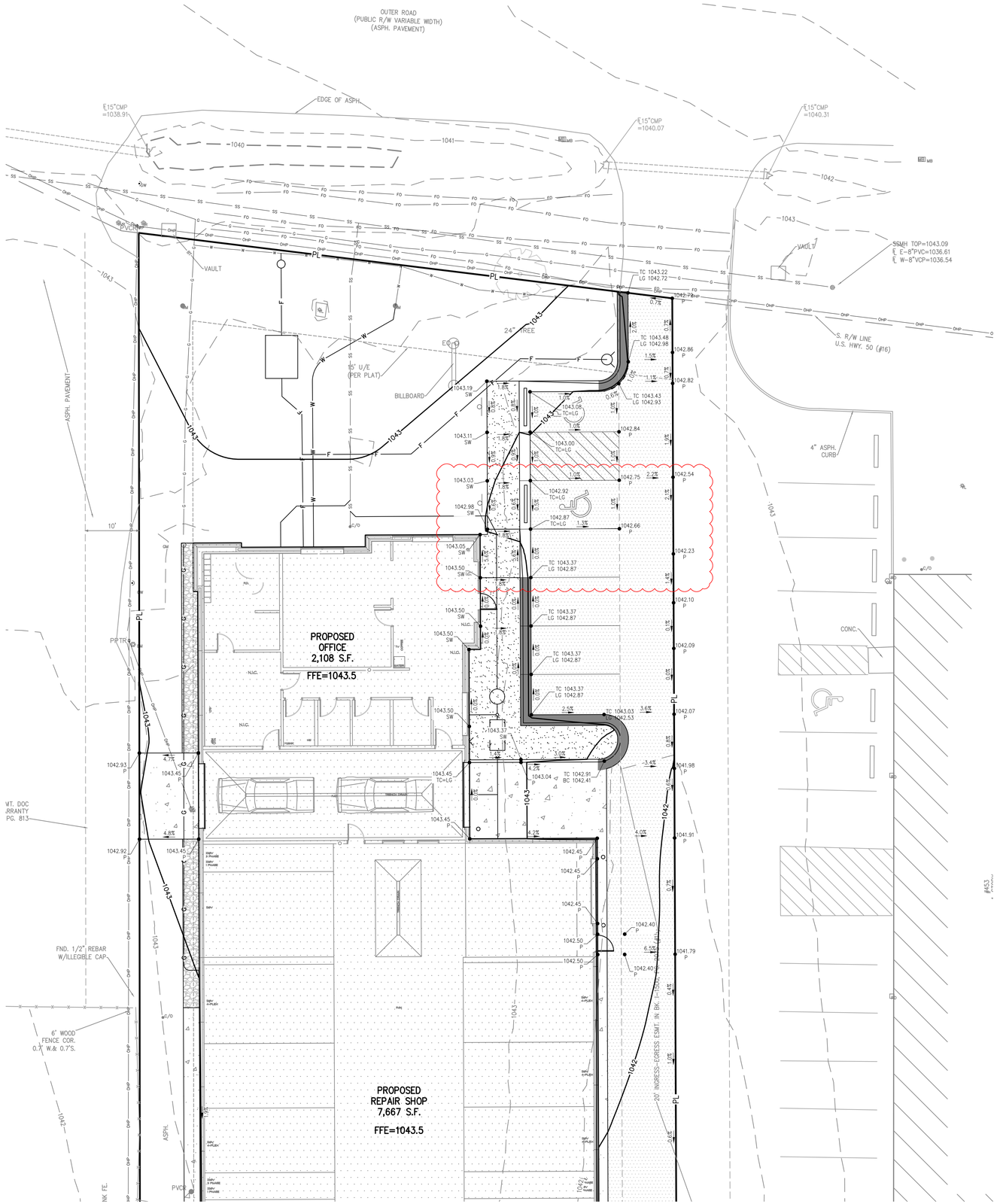
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Revisions:	No.	Date	By	App.
CITY REVIEW COMMENTS	1.	11-10-21	SNH	DAF

PROJECT NO. 210229
DATE: 10-12-21 | DRAWN: SNH
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING - LS-82
CERTIFICATE OF AUTHORIZATION LAND SURVEYING - E-391
CERTIFICATE OF AUTHORIZATION MISSOURI ENGINEERING - 2007001128
CERTIFICATE OF AUTHORIZATION LAND SURVEYING - 2007000229

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SITE GRADING NOTES:

1. CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one foot (1') contour intervals, unless otherwise noted, proposed contours and elevations shown represent approximate finish grade. Contractor shall hold down subgrades to allow for pavement and sub-base thicknesses.

2. If the contractor does not accept existing topography as shown on the plans, without exception, he shall have made at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review.

3. CLEARING AND GRUBBING: Prior to beginning preparation of subgrade, all areas under pavements or building shall be stripped of all topsoil, vegetation, large rock fragments (greater than 6 inches in any dimension) and any other deleterious material. The actual stripping depth should be based on visual examination during construction and the results of proof-rolling operations. The root systems of all trees (not designated to remain) shall be removed in their entirety. Stripping materials shall not be incorporated into structural fills.

4. TOPSOIL STRIPPING: Prior to the start of site grading, the contractor shall strip all topsoil from areas to be graded, and stockpiled at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping. At that time, and prior to the installation of landscaping or irrigation, all topsoil graded areas shall be visually inspected and accepted by the owner and ITL.

5. Contractor shall adjust and/or cut existing pavement as necessary to assure a smooth fit and continuous grade. Contractor shall assure positive drainage away from buildings for all natural and paved areas.

6. SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer or his representative.

7. PROOFROLLING: Subsequent to completion of stripping and over-excavation, all building and pavement areas to receive engineered fill should be systematically proof-rolled using a tandem axle dump truck loaded to approximately 20,000 pounds per axle. Also, any finished subgrade areas to receive paving shall be proof-rolled within 48 hours of paving. Unsuitable soils that are detected and that can not be recompacted should be over-excavated and replaced with controlled structural fill.

8. EARTHWORK:

   A) GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report. Said report and its recommendations are herein incorporated into the project requirements by reference. Prior to beginning construction, the contractor shall obtain a copy of and become familiar with the geotechnical report. Unless specifically noted on the plans, the recommendations in the geotechnical report are hereby incorporated into the project requirements and specifications.

   B) SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.

   C) FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil and debris. In areas where the thickness of the engineered fill is greater than five, feet building and pavement construction should not commence until so authorized by the on-site geotechnical engineer to allow for consolidation.

   D) BUILDING SUBGRADE: As specified in the Geotechnical Engineering Report, the upper section of building subgrade shall consist of Low Volume Change (LVC) material defined as approved, compacted granular fill or low to moderate plasticity cohesive soil materials stabilized with Class C Flyash. Granular fill shall consist of compacted granular materials with a maximum particle size of two (2) inches or less, such as limestone screenings. Refer to geotechnical report for complete requirements.

   E) EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). The benches should be cut wide enough to accommodate the compaction equipment. Fill material shall be placed and compacted in horizontal lifts not exceeding nine inches (9") (loose lift measurement), unless otherwise approved by the Geotechnical Engineer.

   F) COMPACTION REQUIREMENTS: The upper 9 inches of pavement subgrade areas shall be compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall within a range of 0% below to 4% above optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.

9. All cut or fill slopes shall be 3:1 or flatter. All asphalt parking areas shall be a minimum of 1% slope but not more than 5% slope unless otherwise noted. All pavements within ADA parking areas shall not exceed 2% total slope. All grades around building shall be held down 6" from finish floor and slope away another 6" in 10 feet. Contractor shall notify engineer prior to final subgrade construction of any areas not within this slope requirement.

10. TESTING AND INSPECTION: Owner's Independent Testing Laboratory (ITL) shall make tests of earthwork during construction and observe the placement of fills and other work performed on this project to verify that work has been completed in accordance with Geotechnical Engineering Report, Project Specifications and within industry standards. The ITL will be selected by the owner and the cost of testing will be the owner's responsibility.

11. CLASSIFICATION: All excavation shall be considered unclassified. No separate or additional payments shall be made for rock excavation.

12. PERMANENT RESTORATION: All areas disturbed by earthwork operations shall be sodded, unless shown otherwise by the landscaping plan or erosion control plan.

13. UTILITIES: The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.

14. LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA or applicable state N.P.D.E.S. permit for storm water discharge associated with construction activities. Refer to project S.W.P.P.P. requirements.

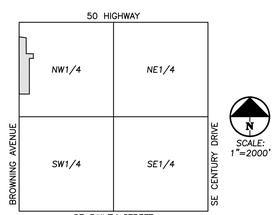
BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS

1. R.R. SPIKE IN W. FACE POWER POLE NEAR SE COR. #453 BLDG.
   ELEVATION = 1043.66
2. R.R. SPIKE IN E. FACE POWER POLE ON W. PROPERTY LINE NEAR SW COR. #451 BLDG.
   ELEVATION = 1043.33

FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0438G, AND DATED JANUARY 20, 2017.



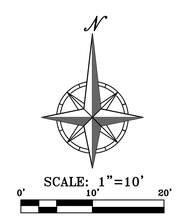
VICINITY MAP
SEC. 8-47-31

811
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LEGEND

PL	PROPERTY LINE
LL	LOT LINE
R/W	RIGHT-OF-WAY
	2' CURB & GUTTER
920	EXISTING CONTOURS
918	
920	PROPOSED CONTOURS
918	
XXX.XX TW	PROPOSED SPOT ELEVATION
LG	LIP OF GUTTER
TC	TOP OF CURB
SW	SIDEWALK
ME	MATCH EXISTING
HP	HIGH POINT
LP	LOW POINT
P	TOP OF PAVEMENT
TE	TOP OF STRUCTURE
GR	GROUND ELEVATION
BS	BOTTOM OF STEPS
TS	TOP OF STEPS
BW	BOTTOM OF WALL
TW	TOP OF WALL
	EXISTING STORM SEWER
	PROPOSED STORM PIPE
	PROPOSED WET CURB & GUTTER
	PROPOSED DRY CURB & GUTTER



STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29858
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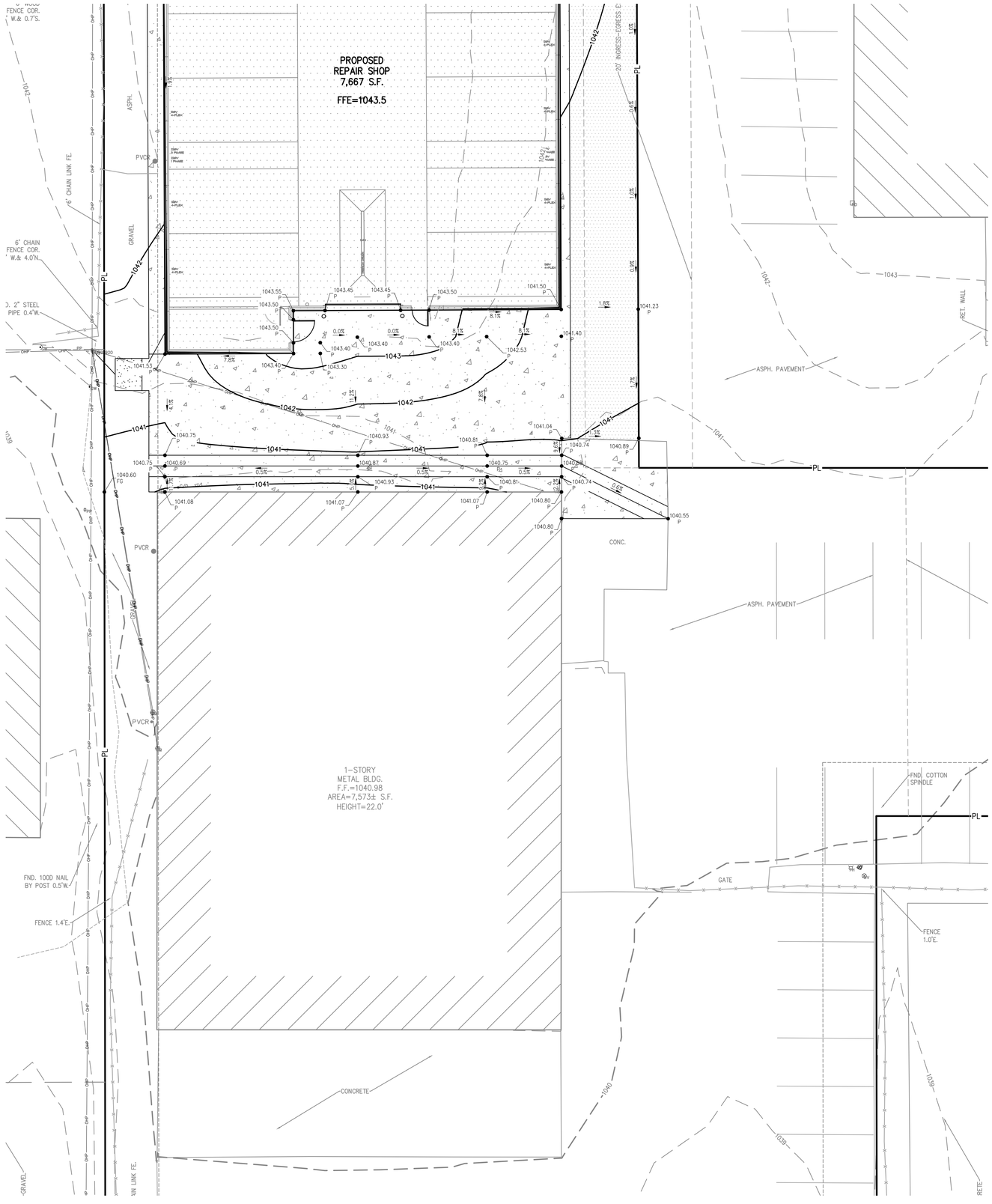
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MISSOURI ENGINEERING - E-391

CERTIFICATE OF AUTHORIZATION
LAND SURVEYING-2007001128
ENGINEERING-2007002308

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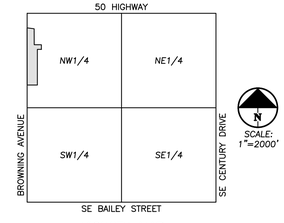
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VICINITY MAP
SEC. 8-47-31

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   F) COMPACTION REQUIREMENTS: The upper 9 inches of pavement subgrade areas shall be compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall within a range of 0% below to 4% above optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.
9. All cut or fill slopes shall be 3:1 or flatter. All asphalt parking areas shall be a minimum of 1% slope but not more than 5% slope unless otherwise noted. All pavements within ADA parking areas shall not exceed 2% total slope. All grades around building shall be held down 6" from finish floor and slope away another 6" in 10 feet. Contractor shall notify engineer prior to final subgrade construction of any areas not within this slope requirement.
10. TESTING AND INSPECTION: Owner's Independent Testing Laboratory (ITL) shall make tests of earthwork during construction and observe the placement of fills and other work performed on this project to verify that work has been completed in accordance with Geotechnical Engineering Report, Project Specifications and within industry standards. The ITL will be selected by the owner and the cost of testing will be the owner's responsibility.
11. CLASSIFICATION: All excavation shall be considered unclassified. No separate or additional payments shall be made for rock excavation.
12. PERMANENT RESTORATION: All areas disturbed by earthwork operations shall be sodded, unless shown otherwise by the landscaping plan or erosion control plan.
13. UTILITIES: The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.
14. LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA or applicable state N.P.D.E.S. permit for storm water discharge associated with construction activities. Refer to project S.W.P.P.P. requirements.

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UTILITY NOTES:
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LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- 920 — EXISTING CONTOURS
- 918 —
- 920 — PROPOSED CONTOURS
- 918 —
- PROPOSED SPOT ELEVATION
- XXX.XX TW

LG	LIP OF GUTTER
TC	TOP OF CURB
SW	SIDEWALK
ME	MATCH EXISTING
HP	HIGH POINT
LP	LOW POINT
P	TOP OF PAVEMENT
TE	TOP OF STRUCTURE
GR	GROUND ELEVATION
BS	BOTTOM OF STEPS
TS	TOP OF STEPS
BW	BOTTOM OF WALL
TW	TOP OF WALL

- EXISTING STORM SEWER
- PROPOSED STORM PIPE
- PROPOSED WET CURB & GUTTER
- PROPOSED DRY CURB & GUTTER



STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29838
11/10/21
REGISTERED PROFESSIONAL ENGINEER

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PLANNING
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IMPLEMENTATION

ENLARGED GRADING PLAN

CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

Revisions:	No.	Date	By	App.
CITY REVIEW COMMENTS	1.	11-10-21	SNH	DAF

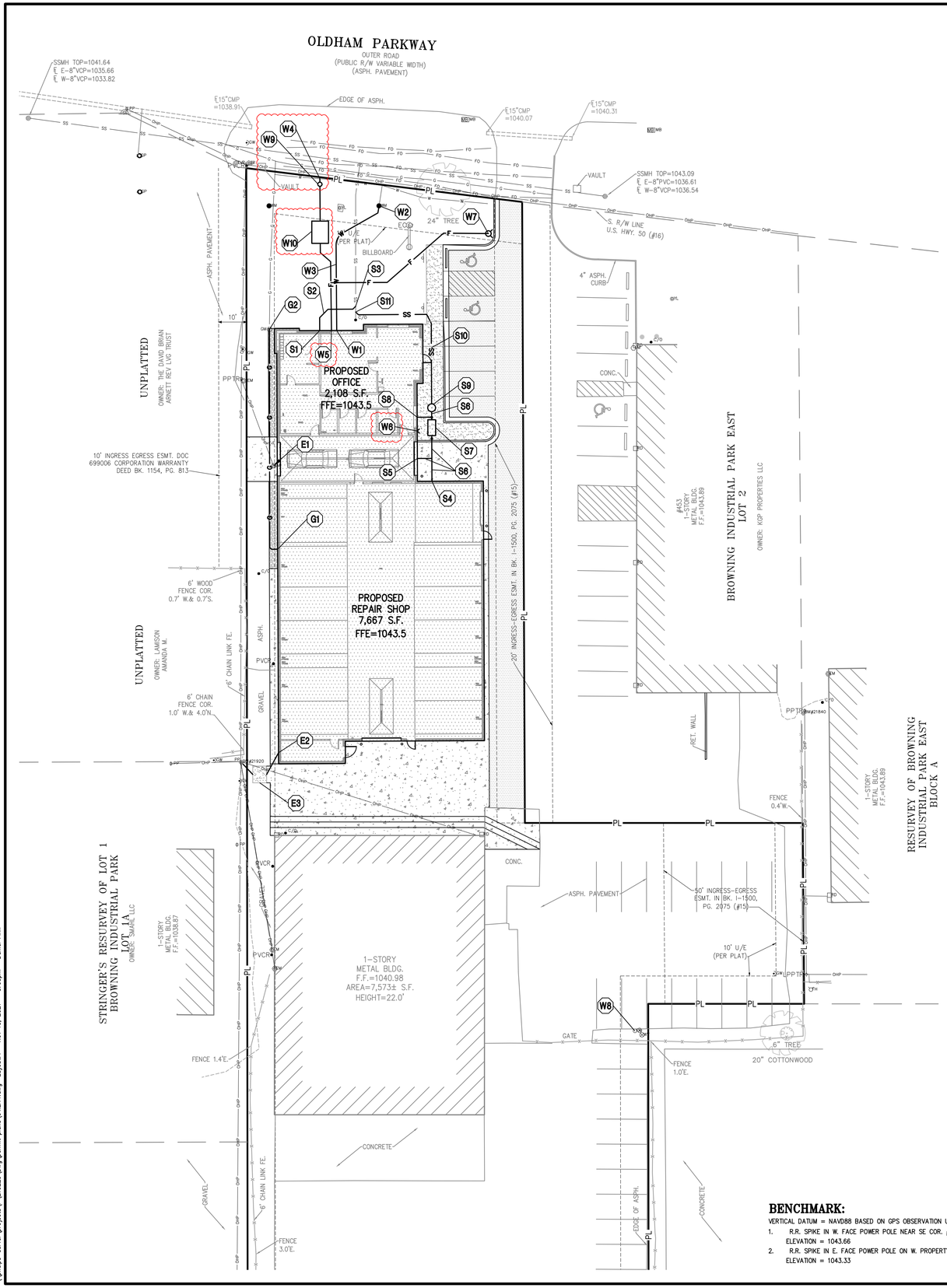
PROJECT NO. 210229
DATE: 10-12-21 | DRAWN: SNH
CHECKED: DAF | APPROVED: JDC

CERTIFICATE OF AUTHORIZATION
KANSAS ENGINEERING - LS-82
MISSOURI ENGINEERING - E-391

CERTIFICATE OF AUTHORIZATION
LAND SURVEYING-2007001128
ENGINEERING-2007003208

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UTILITY KEY NOTES:

G1 GAS ENTRY WITH GAS METER. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY FOR TYING OF INDIVIDUAL METER. SIZE OF GAS MAIN SHALL BE AS DETERMINED BY UTILITY OR AS SHOWN ON BUILDING PLANS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH GAS COMPANY REGARDING THE SIZE & INSTALLATION OF GAS SERVICE LINE.

G2 CONTRACTOR TO COORDINATE REMOVAL OF EXISTING GAS METER AND CONNECTION TO EXISTING AS LINE FOR EXTENSION TO NEW GAS METER LOCATION (RE: MEP PLANS) WITH LOCAL UTILITY PROVIDER.

E1 CONTRACTOR TO COORDINATE RELOCATION OF EXISTING POWER SERVICE WITH LOCAL UTILITY PROVIDER.

E2 ELECTRIC ENTRY INTO BUILDING. FOLLOW LOCAL UTILITY PROVIDER REQUIREMENTS (RE: BUILDING ELECTRIC PLAN.)

E3 PROPOSED LOCATION OF CONCRETE TRANSFORMER PAD. CONTRACTOR TO VERIFY EXACT LOCATION & SIZE WITH IPL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONCRETE PAD & CONDUIT AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY.

W1 1-1/2" DOMESTIC WATER LINE ENTRY TO BUILDING. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE DOMESTIC LINE SUCH AS BACKFLOW PREVENTION DEVICES (RE: BUILDING PLANS), GATE VALVES, REDUCERS, BENDS, TEES, ETC., WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH WATER UTILITY.

W2 CONTRACTOR TO USE IN PLACE EXISTING WATER METER (COORDINATE WITH LOCAL UTILITY PROVIDER). CONTRACTOR TO VERIFY EXISTING METER SIZE AND CONTACT ENGINEER IF METER IS LESS THAN 1". CONTRACTOR TO COORDINATE AND PAY ALL FEES. ALL LABOR AND MATERIALS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR'S PLUMBER IN ACCORDANCE WITH WATER UTILITY STANDARDS.

W3 INSTALL 1-1/2" SOFT TYPE K COPPER DOMESTIC WATER LINE FROM THE EXISTING WATER METER CONNECTION TO THE BUILDING ENTRY.

W4 CONTRACTOR TO PERFORM & COORDINATE CONNECTION TO EXISTING MAIN VIA CUT-IN TEE FOR PROPOSED 6" C900 FIRE LINE. CONTACT WATER UTILITY FOR TAPPING REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN TAP. OWNER WILL REIMBURSE CONTRACTOR FOR ACTUAL METER & SYSTEM DEVELOPMENT FEES ASSESSED BY WATER UTILITY.

W5 6" SPRINKLER ENTRY TO BUILDING. CONTRACTOR SHALL BE REQUIRED TO INSTALL ANY APPURTENANCES ON THE SPRINKLER LINE SUCH AS, BUT NOT LIMITED TO GATE VALVES, REDUCES, BENDS, TEES, ETC. (RE: BUILDING PLANS FOR BUILDING), WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH WATER UTILITY.

W6 FIRE DEPARTMENT CONNECTION (RE: MEP PLANS).

W7 INSTALL PRIVATE FIRE HYDRANT ASSEMBLY.

W8 EXISTING PRIVATE FIRE HYDRANT TO REMAIN.

W9 INSTALL 6" RESTRAINED VALVE AT CONNECTION TO MAIN PER CITY OF LEE'S SUMMIT STANDARDS AND REQUIREMENTS.

W10 INSTALL BACKFLOW VAULT CONTAINING DOUBLE CHECK DETECTOR ASSEMBLY FOR 6" FIRE LINE PER CITY OF LEE'S SUMMIT STANDARD DETAIL WAT-12.

S1 CONNECT TO BLDG. INTERIOR PLUMBING SANITARY SEWER LINE (RE: MEP PLANS) FG=1043.40 FL 4"=1040.80

S2 INSTALL 19 L.F. 4" PVC SANITARY SEWER SERVICE LINE (SDR-26) @ 2.0% MIN. SLOPE.

S3 INSTALL WYE CONNECTION DOWNSTREAM OF EXISTING CLEANOUT (EXISTING CLEANOUT TO REMAIN) EX. 4" FL = 1040.40±

S4 CONNECT TO BLDG. INTERIOR PLUMBING SAND/OIL LINE (RE: MEP PLANS) FG=1043.45 FL 4"=1040.35

S5 CONNECT TO BLDG. INTERIOR PLUMBING SAND/OIL LINE (RE: MEP PLANS) FG=1043.30 FL 4"=1040.35

S6 INSTALL 4" PVC SANITARY SEWER SERVICE LINE (SDR-26) @ 2.0% MIN. SLOPE.

S7 INSTALL SAND OIL INTERCEPTOR (RE: MEP PLANS FOR SPECIFICATION) TE=1043.43 FL 4" IN=1040.03 FL 4" OUT=1040.03

S8 INSTALL 2" PVC VENT LINE (SDR-26) TO BUILDING (RE: MEP PLANS).

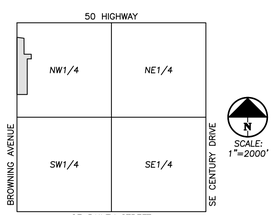
S9 INSTALL E1 GRINDER PUMP (WH101F-74) & HDPE PUMP BASIN. TE=1043.43 FL 4" IN=1039.93 FL 2" OUT=1040.23

S10 INSTALL 2" HDPE FORCE MAIN FROM E-ONE PUMP TO EXISTING 4" SANITARY SEWER LINE.

S11 INSTALL WYE CONNECTION DOWNSTREAM OF EXISTING CLEANOUT (EXISTING CLEANOUT TO REMAIN) EX. 4" FL = 1040.45±

BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS
1. R.R. SPIKE IN W. FACE POWER POLE NEAR SE COR. #453 BLDG. ELEVATION = 1043.66
2. R.R. SPIKE IN E. FACE POWER POLE ON W. PROPERTY LINE NEAR SW COR. #451 BLDG. ELEVATION = 1043.33



VICINITY MAP
SEC. 8-47-31

UTILITY NOTES:

1. The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate &/or remove all existing utilities which conflict with the proposed improvements shown on the plans.
2. The construction of storm sewers on this project shall conform to the requirements of the City's Technical Specifications and Design Criteria.
3. The contractor shall field verify the exact location and elevation of the existing storm sewer lines and the existing elevation at locations where the proposed storm sewer collects or releases to existing ground. If discrepancies are encountered from the information shown on the plans, the contractor shall contact the design engineer. No pipes shall be laid until direction is received from the design engineer.
4. It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations, and to be 6-inches above finished ground elevations in non-paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.
5. Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. Spacing and at all bend points. Do not connect roof drains directly to storm sewer pipe.
6. The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, backflow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system. All costs associated with the complete water system for the buildings shall be the responsibility of the contractor. All work shall conform to the requirements of City.
7. The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the buildings to the public line. All work shall conform to the requirements of the City.
8. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
9. By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.
10. The Contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structures. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.
11. All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.
12. Contractor shall notify the utility authorities inspectors 48 hours before connecting to any existing line.
13. Water lines shall be as follows (unless otherwise shown on plans):

    A. Pipe sizes less than 3-inches that are installed below grade and outside building shall comply with the following:
    1. Seamless Copper Tubing: Type "K" soft copper, ASTM B88.
    2. Fittings: Wrought copper (95_5 Tin Antimony solder joint), ASME B 16.22.

    B. Pipe sizes 3-inches Through 48-inches that are installed below grade and outside building shall comply with one of the following:
    1. Gray Cast Iron Water Pipe: ANSI A21.6, thickness class 52.
       a. Fittings: Either mechanical joint or push_on joint, AWWA C110 or AWWA C111.
       b. Elastomeric gaskets and lubricant: ASTM F477.
       c. Cement Mortar Lining, AWWA C104
    2. Ductile Iron Water Pipe: AWWA C151, thickness class 50.
       a. Fittings: Either mechanical joint or push_on joint, AWWA C110 or AWWA C111.
       b. Elastomeric gaskets and lubricant: ASTM F477.
       c. Cement Mortar Lining, AWWA C104
    3. Polyvinyl Chloride (PVC) Water Pipe: Pipe, AWWA C900, rated DR 18 (Class 150), continually marked as required.
       a. Elastomeric gaskets and lubricant: ASTM F477 for smaller pipes.
       b. Pipe joints: Integrally molded bell ends, ASTM D3139.
       c. Trace wire: Magnetic detectable conductor, (#12 Copper) brightly colored plastic covering imprinted with "Water Service" in large letters
14. Minimum trench width shall be 2 feet.
15. Contractor shall maintain a minimum of 42" cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to waterone's specifications for commercial services.
16. All waterlines shall be kept min. ten (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 24" vertical clearance (outside edge of pipe to outside edge of pipe) of the water line above the sewer line is required.
17. Sanitary conflicts will be resolved prior to permit issuance.
18. In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of crossing (or encased in concrete this same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 24" clearance. Meeting requirements of ANSI A21.10 or ANSI 21.11 (AWWA C-151) (CLASS 50).
19. All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.
20. All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.
21. Refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place & tested prior to paving.
22. When a building utility connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such site utility terminations.
23. Refer to the building plans for site lighting electrical requirements, including conduits, pole boxes, pull boxes, etc.

UTILITY COMPANIES:

MISSOURI GAS ENERGY (816) 969-2218
LUCAS WALLS (LUCAS.WALLS@SUG.COM)
3025 SOUTHEAST CLOVER DRIVE
LEE'S SUMMIT, MO 64082

EVERGY (816) 347-4339
PHILLIP INGRAM (PHILLIP.INGRAM@KCPL.COM)
RON DEJARNETTE (RON.DEJARNETTE@KCPL.COM) (816) 347-4316
1300 HAMBLEN ROAD
LEE'S SUMMIT, MO 64081

STORM SEWER (PUBLIC WORKS DEPARTMENT) (816) 969-1800
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063

SANITARY SEWER & WATER (WATER UTILITIES DEPT.) (816)-969-1900
1200 SE HAMBLEM ROAD,
LEE'S SUMMIT, MO 64081

AT&T (913) 383-4929
MR. CLAYTON ANSPAUGH (CA4089@ATT.COM) (913) 383-4849-FAX
9444 NALL AVENUE
OVERLAND PARK, KANSAS 66207

LEGEND

PL	PROPERTY LINE
LL	LOT LINE
R/W	RIGHT-OF-WAY
CATV	EXISTING CABLE TELEVISION LINE
FO	EXISTING FIBER OPTIC LINE
G	EXISTING GAS LINE
BE	EXISTING BURIED ELECTRIC LINE
OHP	EXISTING OVERHEAD POWER LINE
OHT	EXISTING OVERHEAD TELEPHONE LINE
SS	EXISTING SANITARY SEWER LINE
24"HDPE	EXISTING STORM SEWER LINE (& SIZE)
BT	EXISTING BURIED TELEPHONE LINE
W 6"	EXISTING WATER LINE (& SIZE)
G	PROPOSED GAS LINE
BE	PROPOSED BURIED ELECTRIC LINE
SS	PROPOSED SANITARY SEWER LINE
OHP	PROPOSED OVERHEAD POWER LINE
BT	PROPOSED BURIED TELEPHONE LINE
W	PROPOSED WATER LINE (& SIZE)



STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29858
11/10/24
PROFESSIONAL ENGINEER

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UTILITY PLAN
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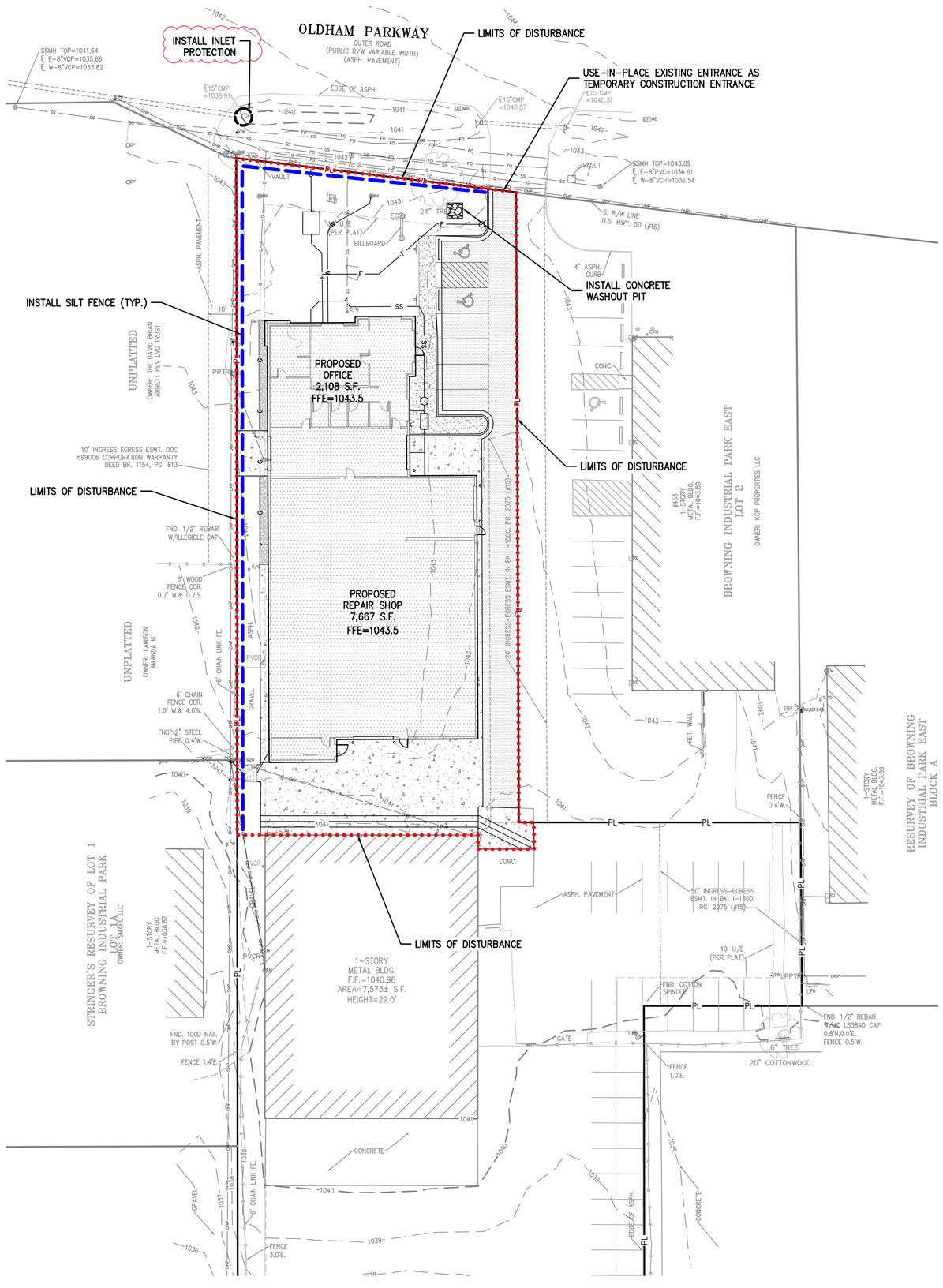
No.	Revisions:	By	App.
1.	CITY REVIEW COMMENTS	SNH	DAF

Date
11-10-21

PROJECT NO. 210229
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CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS ENGINEERING - E-2982
MISSOURI ENGINEERING - LS-82
CERTIFICATE OF AUTHORIZATION LAND SURVEYING-2007001128
ENGINEERING-2007003228

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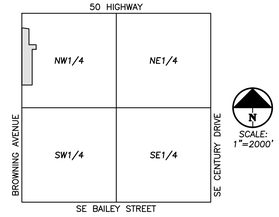
EROSION AND SEDIMENT CONTROL GENERAL NOTES:

1. Prior to Land Disturbance activities, the contractor shall:
   –Delineate the outer limits of any tree or stream preservation designated to remain with construction fencing.
   –Construct a stabilized entrance/parking/delivery area and install all perimeter sediment controls on the site.
   –Install and request the inspection of the preconstruction erosion and sediment control measures designated on the approved erosion and sediment control plan. Land disturbance work shall not proceed until t here is a satisfactory inspection.
   –Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, placement of physical barriers or other means acceptable to the contractor and the City inspector.
2. Erosion and sediment control devices protecting the public right–of–way shall be installed as soon as the right–of–way has been backfilled and graded.
3. The contractor shall comply with all requirements of City Ordinances or State permit requirements, such as:
   –The contractor shall seed, mulch, or otherwise stabilize any disturbed area where the land disturbance activity has ceased for more than 14 days.
   –The contractor shall perform inspections of erosion and sediment control measures at least once a every 14 days and within 24 hours following each rainfall event of ½" or more within any 24–hour period
   –The contractor shall maintain an inspection log including the inspector's name, date of inspection, observations as to the effectiveness of the erosion and sediment control measures, actions necessary to correct deficiencies, when the deficiencies were corrected, and the signature of the person performing the inspection. The log shall be available for review by the City, the State of Missouri, or other authorities having jurisdiction.
4. The contractor shall maintain installed erosion and sediment control devices on a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as a natural stream corridor, tree preservation areas of the site intended to be left undisturbed, a storm sewer, or an on–site drainage channel. Failure to do so is a violation of the provisions of City Ordinances and State permit requirements.
5. The contractor is responsible for providing erosion and sediment control for the duration of a project. If the City determines that the BMP's in place do not provide adequate erosion and sediment control at any time during the project, the contractor shall install additional or alternate measures that provide effective control.
6. Concrete wash or rinsewater from concrete mixing equipment, tools and/or ready–mix trucks, tools, etc., may not be discharged into or be allowed to run directly into any existing water body or storm inlet. One or more locations for concrete wash out will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place and excess water evaporated or infiltrated into the ground.
7. Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials store outside must be in closed and sealed water–proof containers and located outside of drainageways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to contain them.

   MAINTENANCE: ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLANATION, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

   1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
   2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
   3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE–THIRD THE HEIGHT OF THE SILT FENCE.
   4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
   5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

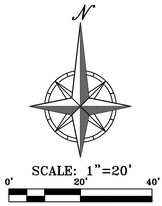
DISTURBED AREA = 0.6± ACRES



VICINITY MAP
SEC. 8–47–31

LEGEND

- STABILIZED ROCK ENTRANCE
- LIMITS OF DISTURBED AREA
- PROPOSED SILT FENCE
- CULVERT INLET PROTECTION



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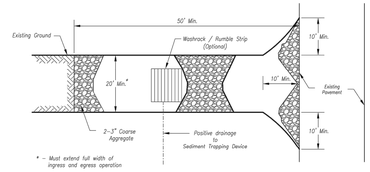
Revisions:

No.	Date	
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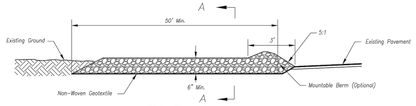
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DATE: 10-12-21 | DRAWN: SNH
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS SURVEYING – LS–82 MISSOURI ENGINEERING – E–391
CERTIFICATE OF AUTHORIZATION LAND SURVEYING–2007001128 ENGINEERING–2007002628

SHEET
C4

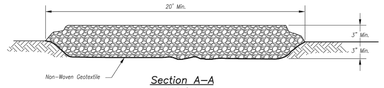
\\phelps-server\projects\P\210229\dwg\permit plans\EROSION.dwg Layout:1 Nov 10, 2021 - 3:03pm Daniel Finn



Plan View
Not to Scale



Side Elevation
Not to Scale



Section A–A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6– to 8–inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

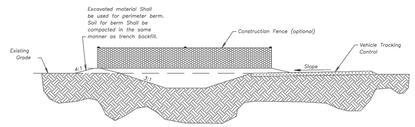
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one–piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

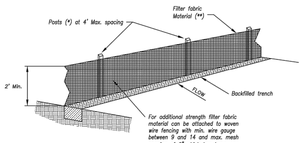
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water–tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.

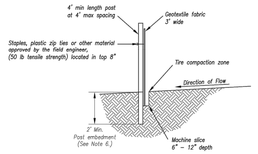


CONCRETE WASHOUT

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01
	ADOPTED: 10/24/2016





Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

(*) *POSTS*
- MIN. LENGTH 4'
- HARDWOOD 1 ¾" x 1 ¾"
- NO.2 SOUTHERN PINE 2 ¾" x 2 ¾"
- STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

SILT FENCE DETAILS
Not to Scale

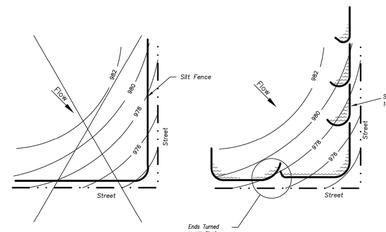
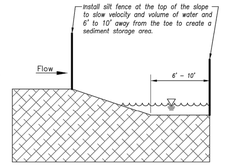
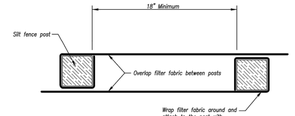


Figure A

SILT FENCE LAYOUT
Not to Scale

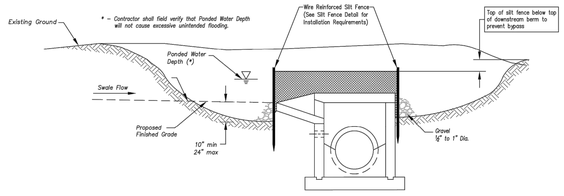




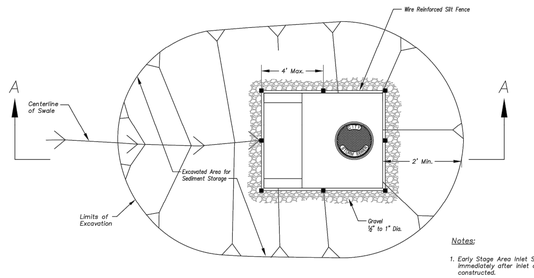
JOINING FENCE SECTIONS
Not to Scale

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

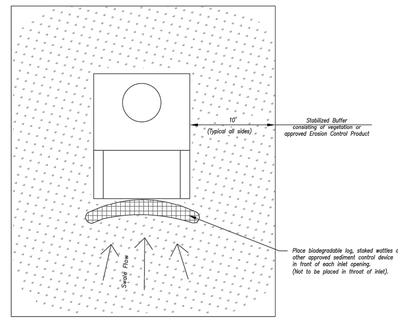
AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
SILT FENCE	STANDARD DRAWING NUMBER ESC-03
	ADOPTED: 10/24/2016



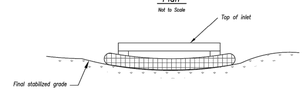
Section A–A
Not to Scale



Plan
Not to Scale



Plan
Not to Scale



Front View

EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07
	ADOPTED: 10/24/2016

PHELPS ENGINEERING, INC.
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www.phelpsengineering.com

PLANNING
ENGINEERING
IMPLEMENTATION

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-2010018
11/10/24
PROFESSIONAL ENGINEER

EROSION CONTROL DETAILS

CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

Revisions:	No.	Date	By	App.
CITY REVIEW COMMENTS	1.	11-10-21	SNH	DAF

PROJECT NO. 210229
DATE: 10-12-21 | DRAWN: SNH
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CERTIFICATE OF AUTHORIZATION
KANSAS ENGINEERING - LS-82
ENGINEERING - E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI ENGINEERING - 2007001128
LAND SURVEYING-2007000295

SHEET
C4.1

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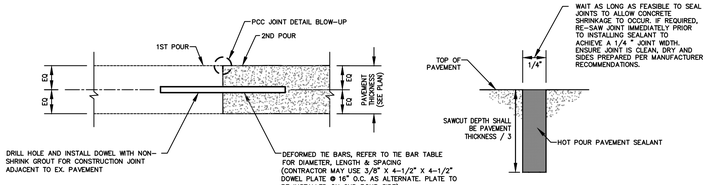
Dowel size*

Slab depth, in. (mm)	Dowel diameter, in. (mm)	Dowel embedment, in. (mm)†	Total dowel length, in. (mm)‡
5 (125)	5/8 (16)	5 (125)	12 (300)
6 (150)	3/4 (19)	6 (150)	14 (360)
7 (180)	7/8 (22)	6 (150)	14 (360)
8 (200)	1 (25)	6 (150)	14 (360)
9 (230)	1-1/8 (29)	7 (180)	16 (400)

*All dowels spaced at 12 in. (300 mm) centers.
†On each side of joint.
‡Allowance made for joint openings and for minor errors in positioning dowels.

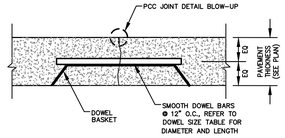
Tie bar dimensions

Slab depth, in. (mm)	Tiebar size, in. (mm)	Tiebar spacing			
		Distance to nearest free edge or to nearest joint where movement can occur			
		10 ft, in. (mm)	12 ft, in. (mm)	14 ft., in. (mm)	24 ft, in. (mm)
5 (125)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	28 (710)
5-1/2 (140)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	25 (630)
6 (150)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	23 (580)
6-1/2 (165)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	21 (530)
7 (180)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	20 (510)
7-1/2 (190)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	18 (460)
8 (200)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	28 (710)	17 (430)
8-1/2 (215)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	36 (910)	16 (410)
9 (230)	1/2 x 30 (13 x 760)	36 (910)	36 (910)	—	24 (610)

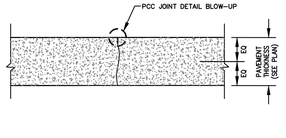


CONSTRUCTION JOINT

PCC JOINT DETAIL BLOW-UP (TYP.)

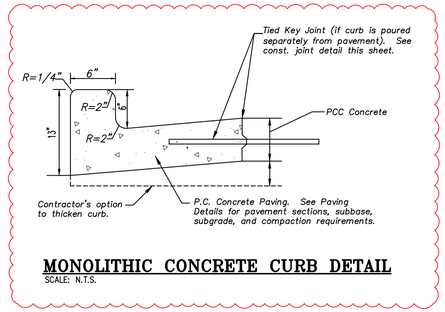


CONTRACTION JOINT (DOWELED)

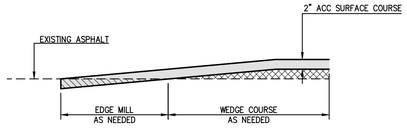


CONTRACTION JOINT (UNDOWELED)

CONCRETE JOINT DETAILS
SCALE: N.T.S.



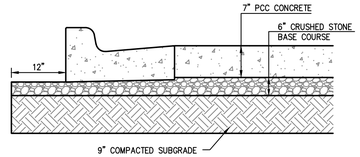
MONOLITHIC CONCRETE CURB DETAIL
SCALE: N.T.S.



ASPHALT MILL & OVERLAY DETAIL
SCALE: N.T.S.

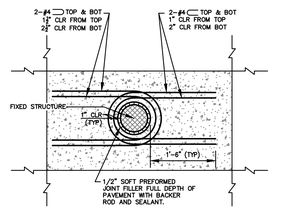
GENERAL PAVING NOTES:

1. PRIOR TO PLACEMENT OF GRANULAR BASE OR ASPHALT, PROOF ROLL AND RE-COMPACT THE EXPOSED SURFACES UP TO A MINIMUM LATERAL DISTANCE OF TWO (2) FEET OUTSIDE THE PAVEMENT. ANY LOCALIZED SOFT, WET, OR LOOSE AREAS IDENTIFIED DURING THE PROOF ROLLING SHOULD BE REPAIRED PRIOR TO PAVING. FILL MATERIAL SHOULD BE PLACED IN LOOSE LIFTS UP TO A MAXIMUM OF EIGHT (8) INCHES IN THICKNESS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698 AT MOISTURE CONTENTS WITHIN 0% AND +4% OF THE OPTIMUM FOR SOILS WITH A LIQUID LIMIT OF GREATER THAN 40, AND – +/– 3% OF THE OPTIMUM FOR SOILS WITH A LIQUID LIMIT OF LESS THAN 40. MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT SHOULD BE DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D 698).
2. PROOFROLL WITH A 25 TON RUBBER TIRE VEHICLE AND REPAIR SUBGRADE DEFICIENCIES. IF ANY SIGNIFICANT EVENT, SUCH AS PRECIPITATION, OCCURS AFTER PROOFROLLING, THE SUBGRADE SHOULD BE REVIEWED BY QUALIFIED PERSONNEL IMMEDIATELY PRIOR TO PLACING THE PAVEMENT.
3. CRUSHED STONE BASE COURSE USED BENEATH CONCRETE PAVING SHALL BE COMPACTED KDOT AB-3 OR EQUIVALENT.
4. ASPHALTIC SURFACE COURSE SHALL BE APWA TYPE 3. THE SURFACE COURSE SHOULD BE COMPACTED TO A MINIMUM OF 97% MARSHALL DENSITY (ASTM SPECIFICATION D 1559). 30% RAP IS ALLOWED.
5. ASPHALTIC BASE COURSE SHALL BE APWA TYPE 1. THE BASE COURSE SHOULD BE COMPACTED TO A MINIMUM OF 95% MARSHALL DENSITY (ASTM SPECIFICATION D 1559). 30% RAP IS ALLOWED.
6. THE CONTRACTOR SHALL PROVIDE A TACK COAT BETWEEN LIFTS OF ASPHALT.
7. ALL SITE CONCRETE (CURBS, PAVEMENTS, SIDEWALKS, ETC.) SHALL MEET KANSAS CITY MATERIALS METRO BOARD (KCMMB) MIX DESIGN SPECIFICATIONS FOR 4,000 P.S.I. AIR ENTRAINED CONCRETE.
8. IN NEW PAVEMENT AREAS, CONTRACTOR SHALL OVER EXCAVATE AS REQUIRED TO ESTABLISH NEW COMPACTED SUBGRADE ELEVATIONS.
9. CONTRACTOR IS RESPONSIBLE FOR ALL PAVEMENT AND SUBGRADE MATERIALS TESTING.

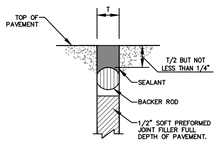


CONCRETE PAVING

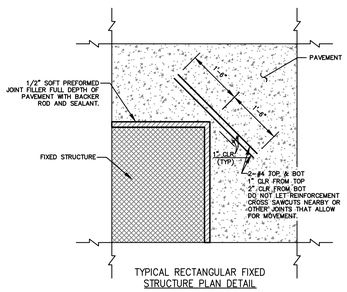
PAVING SECTIONS
SCALE: N.T.S.



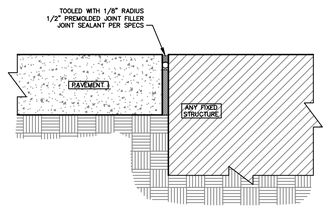
TYPICAL ROUND FIXED
STRUCTURE PLAN DETAIL
USES: MANHOLES, LIGHT POLE BASES AND BOLLARDS



BACKER ROD AND SEALANT
SECTION AT FIXED STRUCTURE



TYPICAL RECTANGULAR FIXED
STRUCTURE PLAN DETAIL
USES: BUILDINGS, RETAINING WALLS/DOCK WALLS AND DROP INLETS



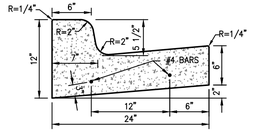
ISOLATION JOINT

NOTES:

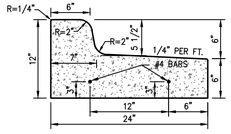
ISOLATION JOINT TO BE USED FOR FIXED STRUCTURES SUCH AS BUILDINGS, RETAINING WALLS/DOCK WALLS, DROP INLETS, MANHOLES, LIGHT POLE BASES AND BOLLARDS.

PAVEMENT IS NOT CONSIDERED A FIXED STRUCTURE.

ISOLATION JOINT DETAILS
SCALE: N.T.S.

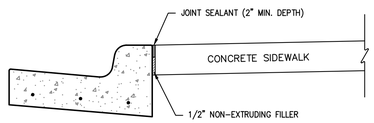


TYPE "B"
CURB & GUTTER



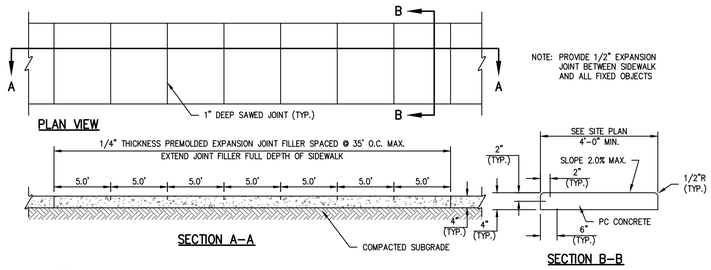
TYPE "B" TIP-OUT
CURB & GUTTER

PRIVATE TYPE "B" CONCRETE CURB & GUTTER DETAILS
SCALE: N.T.S.



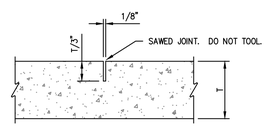
ALL OTHER DETAILS SAME AS SHOWN PER THIS SHEET.

SIDEWALK AT CURB DETAIL
SCALE: N.T.S.

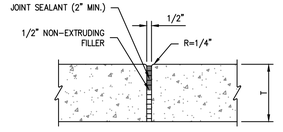


NOTE:
1. USE KANSAS CITY MATERIALS METRO BOARD (KCMMB) MIX DESIGN SPECIFICATIONS FOR 4,000 P.S.I. AIR ENTRAINED CONCRETE FOR ALL PRIVATE SIDEWALKS.

PRIVATE CONCRETE SIDEWALKS (NON REINFORCED)
SCALE: N.T.S.



TYPE A JOINT



TYPE B JOINT

NOTE: TYPE A JOINTS SHALL NOT EXCEED 20 TIMES THE PAVEMENT THICKNESS (T).

CONCRETE SIDEWALK JOINT DETAILS
SCALE: N.T.S.

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
FAX (913) 393-1066
www.phelpsengineering.com
PLANNING ENGINEERING IMPLEMENTATION

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-2008018
11/10/21
REGISTERED ENGINEER

PAVEMENT DETAILS

CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

Revisions:	No.	Date	By	App.
CITY REVIEW COMMENTS	1.	11-10-21	SNH	DAF

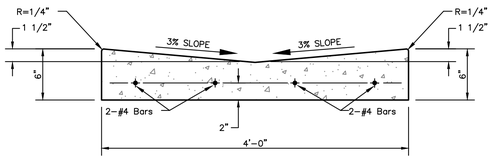
PROJECT NO. 210229
DATE: 10-12-21
DRAWN: SNH
CHECKED: DAF
APPROVED: JDC

CERTIFICATE OF AUTHORIZATION
KANSAS SURVEYING – LS-82
KANSAS ENGINEERING – E-391

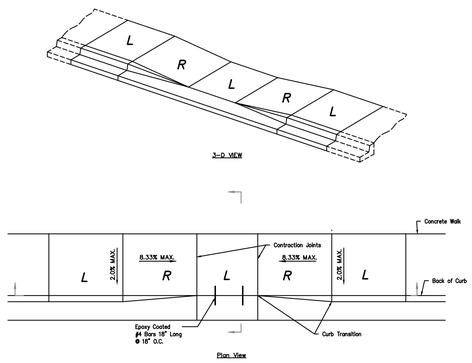
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MISSOURI SURVEYING-2007001128
ENGINEERING-2007003228

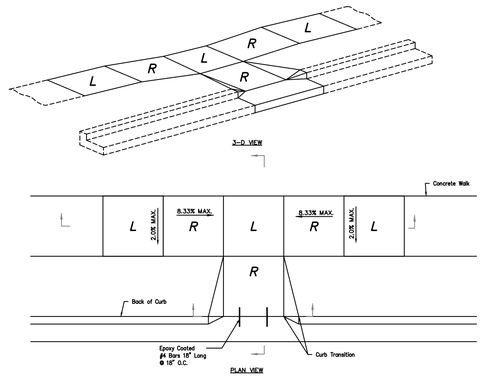
SHEET
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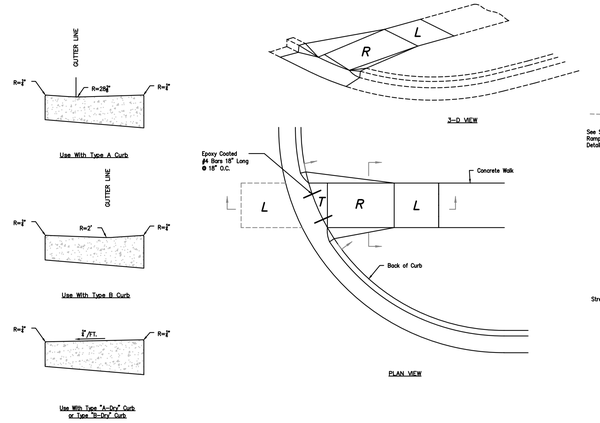
\\phelps-server\projects\P\210229\Dwg\permit plans\DETAILS – PRIVATE.dwg Layout:PAVE 1 Nov 10, 2021 – 3:03pm Daniel Finn

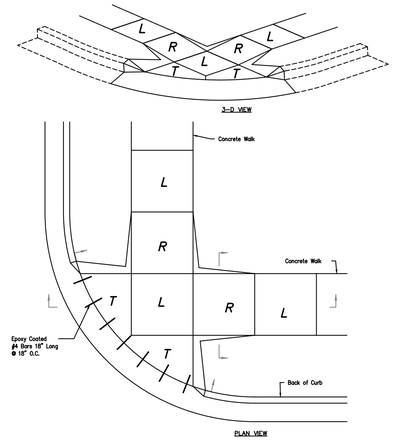


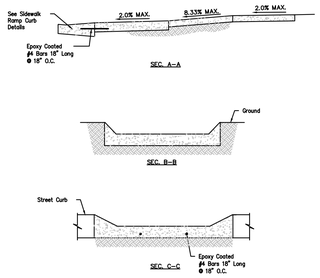
CONCRETE PILOT CHANNEL
SCALE: N.T.S.









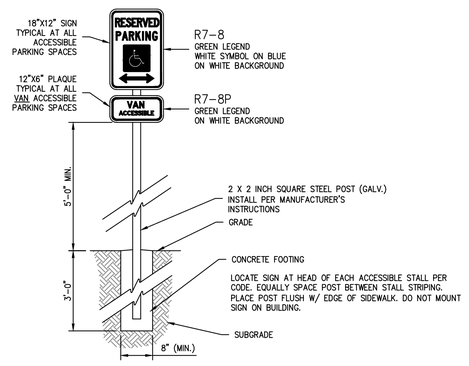


L = LANDING
R = RAMP
T = TRANSITION

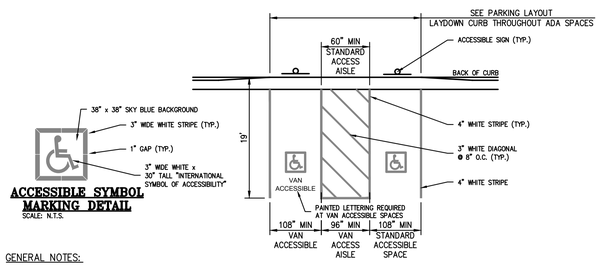
RAMP (Required to transition elevation): Max. Longitudinal Slope – 8.33%
Max. Cross Slope – 2.00%
Min. Width – 5'
Min. Length – 5'

LANDING (Required to change direction of travel): Max. Longitudinal Slope – 2.00%
Max. Cross Slope – 2.00%
Min. Width – 5'

PRIVATE SIDEWALK RAMPS
SCALE: N.T.S.



ACCESSIBLE SIGN DETAIL IN GRASS AREA
SCALE: N.T.S.



GENERAL NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE APPLIED BY A QUALIFIED CONTRACTOR HAVING A MINIMUM 3 YEARS EXPERIENCE IN TRAFFIC GRADE PAVEMENT MARKING APPLICATIONS.
2. PAINT SHALL BE A NON-BLEEDING, QUICK-DRYING, ALKYD PETROLEUM BASE PAINT SUITABLE FOR TRAFFIC-BEARING SURFACE AND SHALL MEET FS TTP-85E & MIXED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION.
3. SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL & DUST.
4. APPLY TWO (2) COATS OF PAINT AT MANUFACTURER RECOMMENDED RATE WITHOUT THE ADDITION OF THINNER, WITH A MAXIMUM OF 100 SQUARE FEET PER GALLON. APPLY WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES. AT SIDEWALK, CURBS, AND CROSSWALKS USE A STRAIGHTEDGE TO ENSURE A UNIFORM, CLEAN, & STRAIGHT STRIPE.
5. THE FOLLOWING ITEMS SHALL BE PAINTED WITH THE COLORS NOTED BELOW:
   A. HANDICAP SYMBOLS: SEE DETAIL THIS SHEET.
   B. PARKING STALL STRIPING: WHITE.
6. ACCESSIBLE PARKING SPACE DESIGN LAYOUT SHALL BE IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
7. SEE SITE PLANS FOR COMPLETE PARKING LAYOUT.

ACCESSIBLE PARKING SPACE DETAIL
SCALE: N.T.S.

PHELPS ENGINEERING, INC.
1270 N. Winchester
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PLANNING
ENGINEERING
IMPLEMENTATION

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29838
11/10/21
PROFESSIONAL ENGINEER

PAVEMENT DETAILS
CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

Revisions:	No.	Date	By	App.
CITY REVIEW COMMENTS	1.	11-10-21	SNH	DAF

PROJECT NO. 210229
DATE 10-12-21
DRAWN SNH
CHECKED DAF
APPROVED JDC

CERTIFICATE OF AUTHORIZATION
KANSAS SURVEYING – LS-82
ENGINEERING – E-391

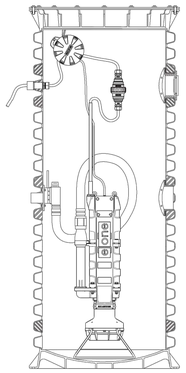
CERTIFICATE OF AUTHORIZATION
LAND SURVEYING-2007001128
ENGINEERING-2007005308

SHEET
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E/ONE EXTREME SERIES

WH101F/WR101F



General Features

The model WH101F or WR101F grinder pump station is a complete unit that includes: the grinder pump, check valve, HDPE (high density polyethylene) tank, controls, and alarm panel. This station is designed for areas where high floodplain conditions occur. The WH101F or WR101F is a watertight, sealed station capable of sustaining a 15-foot flood above the top of the station. This type of flood condition will not affect the continued operation of the pump; the homeowner should rely on uninterrupted service.

- Rated for flows of 700 gpd (2650 lpd)
- 70 gallons (265 liters) of capacity
- Standard outdoor heights range from 60 inches to 160 inches

The WH101F is the "hardwired," or "wired," model where a cable connects the motor controls to the level controls through watertight penetrations.

The WR101F is the "radio frequency identification" (RFID), or "wireless," model that uses wireless technology to communicate between the level controls and the motor controls.

Operational Information

Motor
1 hp, 1,725 rpm, high torque, capacitor start, thermally protected, 120/240V, 60 Hz, 1 phase

Inlet Connections
4" PVC inlet flange for Schedule 40 pipe

Discharge Connections
Pump discharge terminates in 1.25-inch NPT female thread. Can easily be adapted to 1.25-inch PVC pipe or any other material required by local codes.

Discharge
15 gpm at 0 psig (0.95 lps at 0 m)
11 gpm at 40 psig (0.69 lps at 28 m)
7.8 gpm at 80 psig (0.49 lps at 56 m)

Accessories

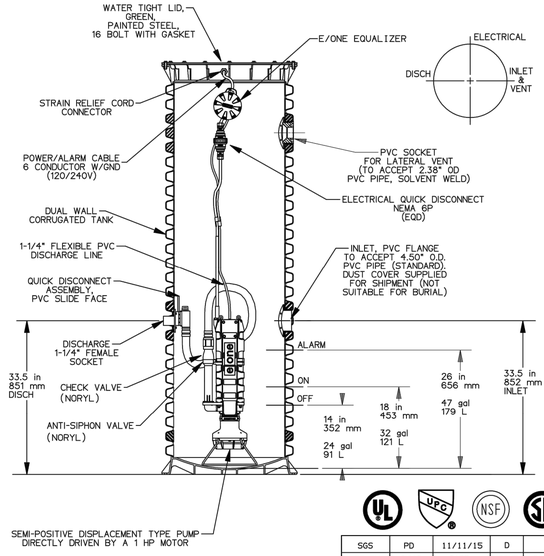
E/One requires that the Uni-Lateral, E/One's own stainless steel check valve, be installed between the grinder pump station and the street main for added protection against backflow.

Alarm panels are available with a variety of options, from basic monitoring to advanced notice of service requirements.

The Remote Sentry is ideal for installations where the alarm panel may be hidden from view.

NA0058P01 Rev C

OPTIONS : ☐ WH101F (HARD WIRED LEVEL CONTROLS)
☐ WR101F (WIRELESS LEVEL CONTROLS)



CONCRETE BALLAST MAY BE REQUIRED
SEE INSTALLATION INSTRUCTIONS
FOR DETAILS

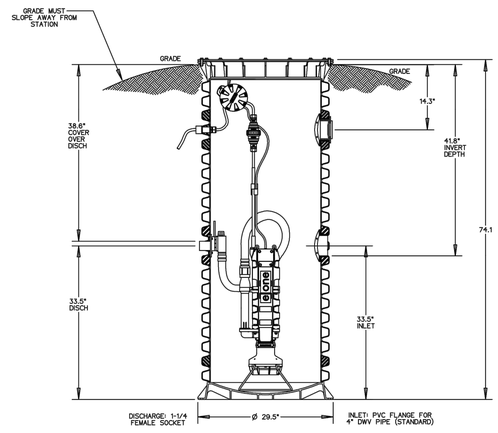
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DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL WH101F / WR101F
DETAIL SHEET

NA0058P02

OPTIONS : ☒ WH101F -74 (HARD WIRED LEVEL CONTROLS)
☐ WR101F -74 (WIRELESS LEVEL CONTROLS)



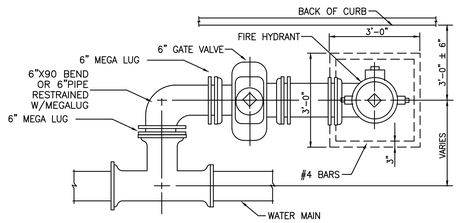
CONCRETE BALLAST MAY BE REQUIRED
SEE INSTALLATION INSTRUCTIONS
FOR DETAILS

AD	CH	07/16/07	C	
DR BY	CHK'D	DATE	ISSUE	SCALE

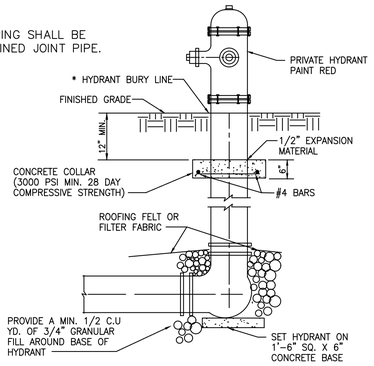
e/one SEWER SYSTEMS

MODEL WH101F-74 / WR101F-74

NA0058P04



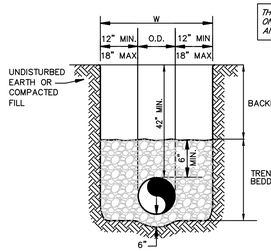
NOTE:
ALL PIPING SHALL BE RESTRAINED JOINT PIPE.



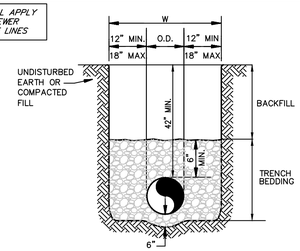
NOTE:
WHEN FIRE HYDRANT'S GATE VALVE EXCEEDS THE DISTANCE OF 5'-0" FROM CENTER OF GATE VALE TO CENTERLINE OF TEE. GATE VALVE SHALL BE ASSEMBLED TO WATER MAIN'S TEE.

TYPICAL
FIRE HYDRANT
INSTALLATION DETAIL

THESE DETAILS SHALL APPLY ONLY TO PRIVATE SEWER AND WATER SERVICE LINES



WATER LINE
SCALE: NOT TO SCALE



SANITARY SEWER
SCALE: NOT TO SCALE

REQUIREMENTS PER APWA 2100 AS FOLLOWS:

Sanitary Sewer Bedding Material Gradation Limits (% Passing)	
Sieve Size	3/4"
1"	100
3/4"	90 – 100
3/8"	20 – 55
No. 4	0 – 5
No. 8	0 – 2

Storm Sewer Bedding Material Gradation Limits (% Passing)			
Sieve Size	3/4"	1/2"	3/8"
1"	100		
3/4"	90 – 100	100	
1/2"		80 – 100	
3/8"	20 – 55	40 – 77	100
No. 4	0 – 10	0 – 15	30 – 40
No. 8	0 – 5	0 – 5	0 – 4

Waterline Bedding Material Gradation (% Passing)					
Sieve Size	Type 1 (1/2")	Type 2 (Buckshot)	Type 3 (Man. Sand)	Type 4 (River Sand)	
3/4"	95 – 100				
3/8"	40 – 60	100	100		
1/4"			90 – 100		
No. 4		60 – 80	85 – 90	100	
No. 8	0 – 5	0 – 15	35 – 75		
No. 50			10 – 25		
No. 200		0	0 – 10	0 – 10	

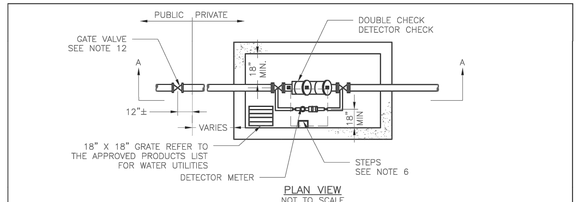
Trench Backfill

1. Backfill shall not be placed when material contains frost, is frozen, or a blanket of snow prevents proper compaction.
2. The Contractor shall remove from the project site waste material, trees, organic material, rubbish, or other deleterious materials.
3. All trash and debris shall be removed from the pipeline excavation prior to backfilling.
4. Backfill material shall be carefully placed to avoid damage to or displacement of the pipe, other utilities or structures.
5. Unless otherwise specified, all trenches and excavations around structures shall be backfilled to the original ground surface.
6. Outside of paved areas, the backfill material shall be placed in layers not exceeding 8-inches in loose thickness and be compacted to at least 90% of maximum density. Compaction testing shall be at the discretion of the Engineer.
7. The method of compaction and the equipment used shall be appropriate for the material to be compacted and shall not transmit damaging shocks to the pipe.
8. The combination of the thickness of the layer, the method of compaction and the type of compaction equipment used shall be at the discretion of the Contractor subject to obtaining the required densities.

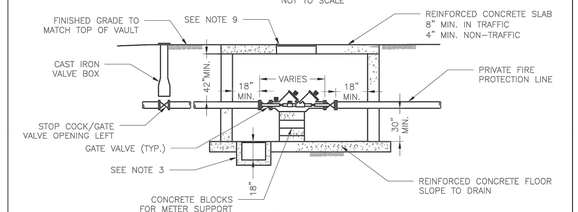
Pipe Embedment. All water, sanitary sewer, and storm sewer pipe shall be bedded in bedding aggregate as specified herein.

1. Bedding shall cover the entire width of trench.
2. The first layer of bedding placed on the bottom of excavation shall be in accordance with Figures 1 through 3.
3. Bedding at bottom of trench, in the middle 1/3 of trench under the pipe shall be loose.
4. After pipe is placed, bedding material shall be placed in layers in accordance with manufacturer's recommendations.
5. Second layer of bedding material shall be placed under the lower haunches of the pipe up to the springline (center of pipe). Material shall be spaded to be place under haunches and compacted at the springline elevation prior to placing additional bedding material.
6. The third layer of bedding material shall be placed to 12 inches over the top of pipe.
7. Contractor shall take measures to prevent pipe from floating during placement of bedding material so that pipe maintains proper line and grade as shown on the Plans.

UTILITY TRENCH AND BEDDING



PLAN VIEW
NOT TO SCALE



SECTION A–A
NOT TO SCALE

GENERAL NOTES:

1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN INTO IT. VAULT MUST BE KEPT FREE OF WATER. PROVIDE CONCRETE SUMP AS A MINIMUM, WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE–GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
4. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
5. ALL FITTINGS TO BE BRASS.
6. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
7. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT THE WATER UTILITIES OPERATIONS DIVISION AT 816–969–1940. AS OF JANUARY 1, 1987, THE DNR REQUIRES FIRE SPRINKLER SYSTEMS USING CHEMICALS TO HAVE A DNR APPROVED PRESSURE BACKFLOW PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.
8. ALL VALVES SHALL HAVE RISING STEMS.
9. FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR EITHER TRAFFIC OR NON–TRAFFIC CONDITIONS.
10. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
11. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
12. IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

LS **LEE'S SUMMIT** MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VAULT FOR DOUBLE CHECK DETECTOR CHECK

Date: 02/2016
Drawn By: JN
Checked By: DL

WAT-12

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29830
11/10/21
PROFESSIONAL ENGINEER

PHELPS ENGINEERING, INC.
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Olathe, Kansas 66061
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PLANNING
ENGINEERING
IMPLEMENTATION

SANITARY & WATER DETAILS

CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

By	App.
SNH	DAF

Revisions:
CITY REVIEW COMMENTS

No.	Date
1.	11-10-21

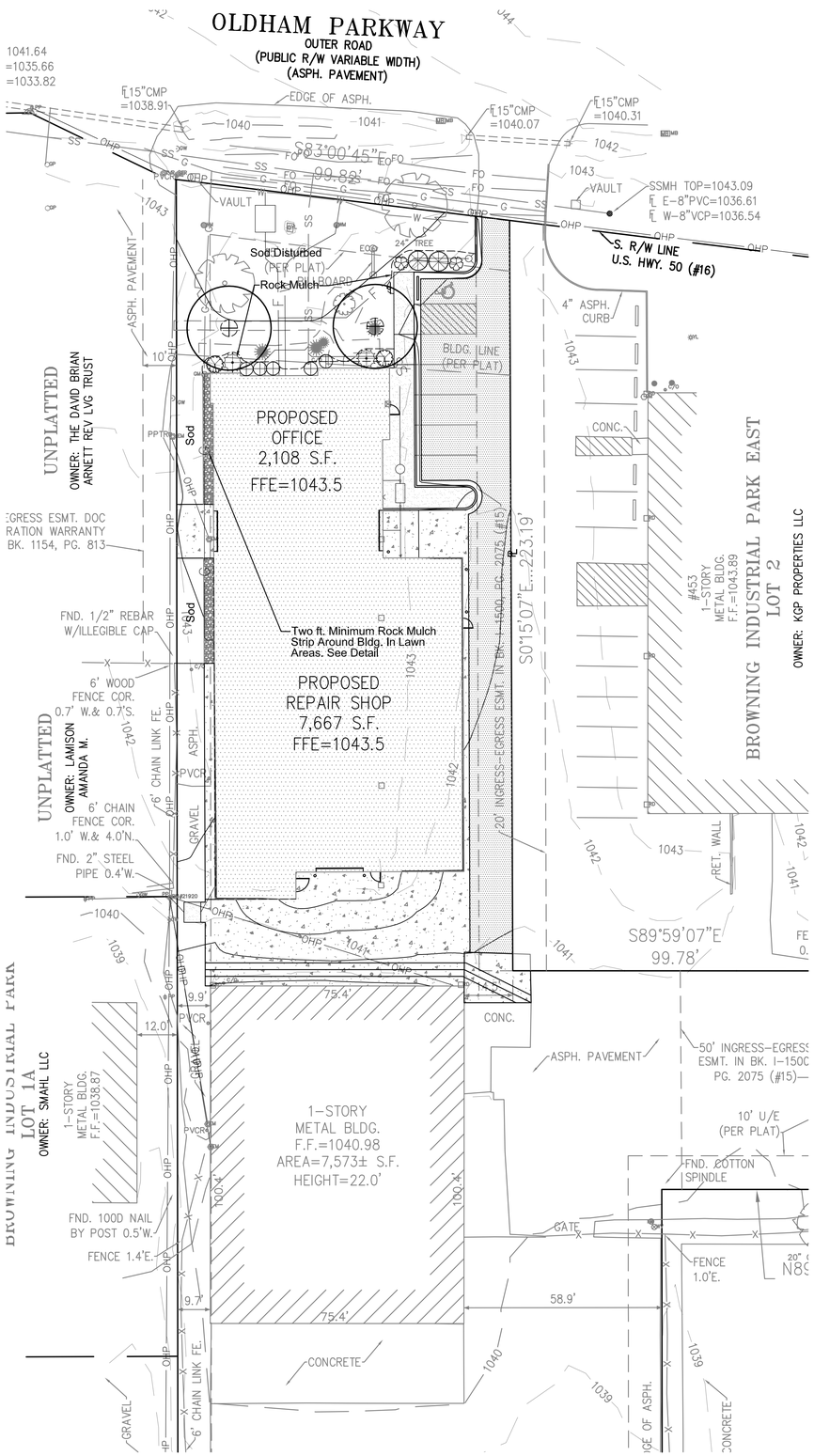
PROJECT NO. 210229
DATE: 10-12-21 | DRAWN: SNH
CHECKED: DAF | APPROVED: JDC

CERTIFICATE OF AUTHORIZATION
KANSAS SURVEYING – LS–82
ENGINEERING – E–391

CERTIFICATE OF AUTHORIZATION
MISSOURI SURVEYING
LAND SURVEYING–2007001128
ENGINEERING–2007002938

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PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL
+	2	Gleditsia triacanthos `Skyline` / `Skyline` Honey Locust	B & B	3" CAL

SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT
⊛	2	Juniperus chinensis `Sea Green` / Sea Green Juniper 24"-30" hgt. & sp.	5 gal
⊛	2	Juniperus virginiana `Grey Owl` / Grey Owl Juniper 24" sp.	3 gal
⊛	2	Physocarpus opulifolius `Center Glow` / Center Glow Ninebark 24"-30" hgt. & sp.	3 gal
⊛	2	Spiraea x bumalda `Anthony Waterer` / Anthony Waterer Spiraea 18"-24" hgt.	3 gal
⊛	5	Spiraea x bumalda `Gold Flame` / Gold Flame Spirea 18"-24" hgt.	3 gal

Transplant Additives:

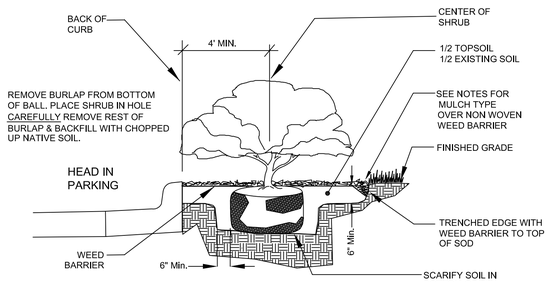
1. Apply a commercial transplant additive (approved by the Landscape Architect) to all trees, shrubs and groundcover at rates recommended by the manufacturer during the planting. This item shall be subsidiary to other planting items.

2. Transplant additive shall be Horticultural Alliance "DIEHARD Transplant" (or approved equal) mycorrizal fungal transplant innoculant or equivilent equal containing the appropriate species of mycorrhizal fungi and bacteria, fungi stimulant, water retaining agents, mineral & organic nutrients and inert ingredients.

3. Demonstrate installation of all transplant additives for this project to the Landscape Architect. Provide actual additive product as evidence of sufficient quantity of product. (Empty product bags to be stockpiled for inspection by the Landscape Architect prior to disposal).

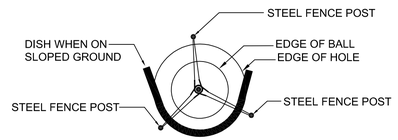
4. Number of transplant additive packets per tree, shrub or grouncover shall be applied according to the manufacturer's recommended rates and instructions. For all plants the packet mix shall be evenly distributed into the upper approximately 8" of backfill soil next to the rootball. Do not place mix in the bottom of the planting pit.

5. Furnishing and application of transplant additive shall be subsidiary to the planting operations.

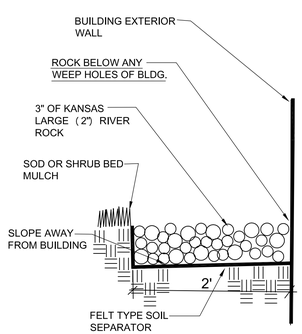


SHRUB BED & PARKING SETBACK DETAIL

NO SCALE



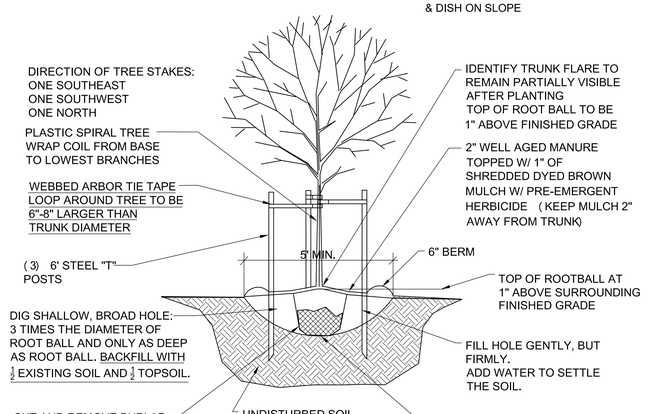
STAKING PLAN & DISH ON SLOPE



BUILDING ROCK EDGE

NO SCALE

*PLACE ROCK AROUND ENTIRE BLDG. PERIMETER WHEREVER THERE IS NOT CONCRETE OR ASPHALT

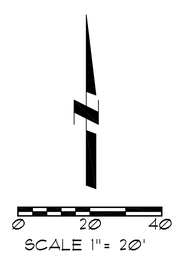


TREE PLANTING DETAIL

NO SCALE

GENERAL LANDSCAPE NOTES:

1. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE STARTING ANY WORK.
2. CONTRACTOR SHALL VERIFY ALL LANDSCAPE MATERIAL QUANTITIES AND SHALL REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
3. CONTRACTOR SHALL MAKE NO SUBSTITUTIONS WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT.
4. CONTRACTOR SHALL STAKE LAYOUT PLAN IN THE FIELD AND SHALL HAVE THE LAYOUT APPROVED BY THE LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH THE INSTALLATION.
5. ALL LANDSCAPE BEDS SHALL BE TREATED WITH THE PRE-EMERGENT HERBICIDE PRE M 60 DG (GRANULAR) OR AN APPROVED EQUAL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
6. ALL LANDSCAPE BEDS SHALL RECEIVE A TRENCHED EDGE. SEE SHRUB PLANTING DETAIL.
7. FERTILIZER FOR FESCUE SODDED LAWN, TREES AND CONTAINER STOCK AREAS SHALL BE A BALANCED FERTILIZER BASED ON RECOMMENDATIONS FROM A SOIL TEST SUPPLIED BY THE LANDSCAPE CONTRACTOR FROM AN APPROVED TESTING LAB.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE PLANTS UNTIL COMPLETION OF THE JOB AND ACCEPTANCE BY THE OWNER.
9. CONTRACTOR SHALL WARRANTY ALL LANDSCAPE WORK AND PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF THE WORK BY THE OWNER.
10. CONTRACTOR SHALL PROVIDE MAINTENANCE OF ALL TREES AND SHRUBS FOR A PERIOD OF ONE YEAR AFTER THE DATE OF SUBSTANTIAL COMPLETION IF CONTRACTED BY THE OWNER.
11. ANY PLANT MATERIAL WHICH DIES DURING THE ONE YEAR WARRANTY PERIOD SHALL BE REPLACED BY THE CONTRACTOR DURING NORMAL PLANTING SEASONS.
12. ALL PLANT NAMES ON THE PLANT LIST CONFORM TO THE STANDARDIZED PLANT NAMES PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE OR TO NAMES GENERALLY ACCEPTED IN THE NURSERY TRADE.
13. ALL PLANT MATERIAL SHALL BE SPECIMEN QUALITY STOCK AS DETERMINED IN THE "AMERICAN STANDARDS FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN, FREE OF PLANT DISEASES AND PESTS, OF TYPICAL GROWTH OF THE SPECIES AND HAVING A HEALTHY, NORMAL ROOT SYSTEM.
14. SIZES INDICATED ON THE PLANT LIST ARE THE MINIMUM, ACCEPTABLE SIZE. IN NO CASE WILL SIZES LESS THAN THE SPECIFIED SIZES BE ACCEPTED.
15. PLANTS SHALL NOT BE PRUNED PRIOR TO DELIVERY TO THE SITE OR AFTER INSTALLATION EXCEPT FOR THOSE BRANCHES THAT HAVE BEEN DAMAGED IN SOME WAY.
16. PLANTS SHALL NOT HAVE NAME TAGS REMOVED PRIOR TO FINAL INSPECTION.
17. ALL PLANTINGS SHALL RECEIVE A COMMERCIAL TRANSPLANT ADDITIVE PER MANUFACTURER'S RECOMMENDED RATES AND INSTRUCTIONS FOR APPLICATION.
18. MULCH SHALL BE 3" DEPTH OF KANSAS LARGE 2" SIZE AVAILABLE FROM STURGIS MATERIALS OR APPROVED EQUAL, OVER A FELT TYPE SOIL SEPARATOR CUT INTO THE GROUND WITH A TRENCHED EDGE. SEE TREE DETAIL FOR DIFFERENT MULCH AROUND TREES.
19. SEE PLANTING DETAILS FOR SOIL MIX IN PLANTING HOLES.
20. SOD SHALL BE A TURF-TYPE-TALL FESCUE GRASS BLEND. CONTRACTOR SHALL BE RESPONSIBLE FOR AN ACCEPTABLE STAND OF TURF TO BE APPROVED BY THE OWNER AND/OR LANDSCAPE ARCHITECT.
21. SUCCESSFUL LANDSCAPE BIDDER SHALL BE RESPONSIBLE FOR THE MODIFICATION OF ANY EXISTING IRRIGATION SYSTEM, OR THE DESIGN AND INSTALLATION OF A NEW IRRIGATION SYSTEM TO BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION IF THE OWNER DESIRES AN IRRIGATION SYSTEM.
22. WOOD MULCH FOR TREES SHALL BE A DYED BROWN SHREDDED HARDWOOD.



Utility Note:

Utilities shown on plan are diagramatic and some may be missing. Before starting any construction call appropriate locating service. In Missouri call 1-800-DIG-RITE (344-7483) to have utilities located.

STATE OF MISSOURI
PETER A. OPPERMANN
NUMBER 2005012547
LANDSCAPE ARCHITECT

10/15/2021

Landscape Plan
Crash Champions

451 SE Oldham Parkway
Lee's Summit, MO

LS-1

Oppermann LandDesign, LLC
Land Planning Landscape Architecture
22 Debra Lane
New Windsor, New York 12553
pete@opperland.com
913.522.5598

CODE REVIEW

CODES USED

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FIRE CODE
2017 NATIONAL ELECTRICAL CODE
2012 INTERNATIONAL ENERGY CODE

IBC CHAPTER 3 - USE & CLASSIFICATION

OCCUPANCY GROUPS: GROUP S1

BUILDING FOOT PRINT AREA: 9,775 S.F.

IBC CHAPTER 5 - BUILDING AREA & HEIGHTS

75' ALLOWABLE HT. PER TABLE 504.3
2 STORIES ALLOWED PER TABLE 504.4
TABLE 506.2 (S1) ALLOWS FOR 70,000 SF PER FLOOR
ACTUAL BUILDING STORIES = 1
ACTUAL BUILDING HT = 28'-0"
FULLY FIRE SPRINKLER BUILDING

IBC CHAPTER 6 - TYPES OF CONSTRUCTION

TABLE 601: CONSTRUCTION TYPE IIB

TABLE 601: FIRE RESISTANT RATINGS

STRUCTURAL FRAME:	0-HOUR
BEARING WALLS: EXT.	0-HOUR
BEARING WALLS: INT.	0-HOUR
NON-BEARING WALLS: EXT.	0-HOUR
NON-BEARING WALLS: INT.	0-HOUR
FLOOR CONSTRUCTION:	0-HOUR
ROOF CONSTRUCTION:	0-HOUR

TABLE 602: FIRE RESISTANT RATINGS FOR FIRE SEPARATION
NO RATINGS OF EXTERIOR WALLS REQUIRED PER DISTANCE

GROUP S1 EXTERIOR WALL RATINGS 10< X <30 = 0

ACTUAL SEPARATION DISTANCES

NORTH ELEVATION SEPARATION DISTANCE >30'
SOUTH ELEVATION SEPARATION DISTANCE >12'
WEST ELEVATION SEPARATION DISTANCE >10'
EAST ELEVATION SEPARATION DISTANCE >14'

IBC CHAPTER 8 - INTERIOR FINISHES

ALL INTERIOR FINISH MATERIALS SHALL HAVE A MIN CLASS 'C'
FLAME SPREAD CLASSIFICATION OR BETTER
FLAME SPREAD INDEX 76-200
SMOKE DEVELOPMENT INDEX 0-450

IBC CHAPTER 9 - FIRE PROTECTION SYSTEMS

FULLY SPRINKLED PER SECTION 901.2
MANUAL FIRE ALARM SYSTEM IS NOT REQUIRED

IBC CHAPTER 10 - MEANS OF EGRESS

SECTION 1004 OCCUPANT LOAD
GROUP S1 OCCUPANT LOAD FACTOR = 300 GROSS
9,775 / 300 = 33 OCCUPANTS
SECTION 1005 MEANS OF EGRESS SIZING
SECTION 1005.3.2 EGRESS WIDTH SIZING IS .2" PER OCCUPANT
SECTION 1006 NUMBER OF EXITS
2 EXITS REQUIRED
3 EXITS PROVIDED
MAX. COMMON PATH OF EGRESS = 100'
33 OCCUPANTS / 3 EXITS = 11 OCCUPANTS PER EXIT
11 X .2 = 2.2" EGRESS WIDTH PER EGRESS DOOR REQUIRED
180 OCCUPANT CAPACITY PER 36" WIDE EGRESS DOOR PROVIDED

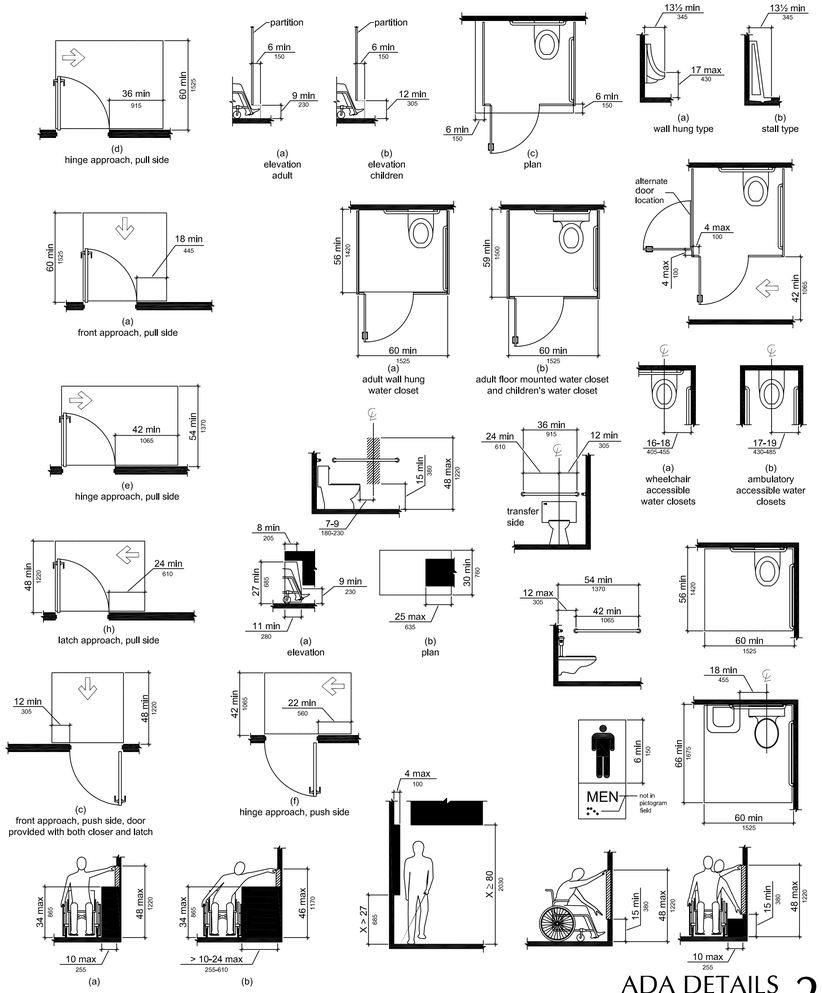
SECTION 1017 EXIT ACCESS TRAVEL DISTANCE
TABLE 1017.2 ; 300' TRAVEL MAX TRAVEL DISTANCE ALLOWED

SECTION 1020 CORRIDORS
NON RATED PER TABLE 1020.1 FOR FIRE SPRINKLED BUILDINGS
SECTION 1020.2
CORRIDOR WIDTH 44" MIN.
DEAD ENDS 50' MAX.

IBC CHAPTER 29 - PLUMBING SYSTEMS

TABLE 2902.1
OCCUPANT LOAD 33
17 OCCUPANT LOAD PER SEX
1 PLUMBING FIXTURES REQUIRED PER SEX
1 LAVATORIES REQUIRED PER SEX
1 SERVICE SINKS PROVIDED

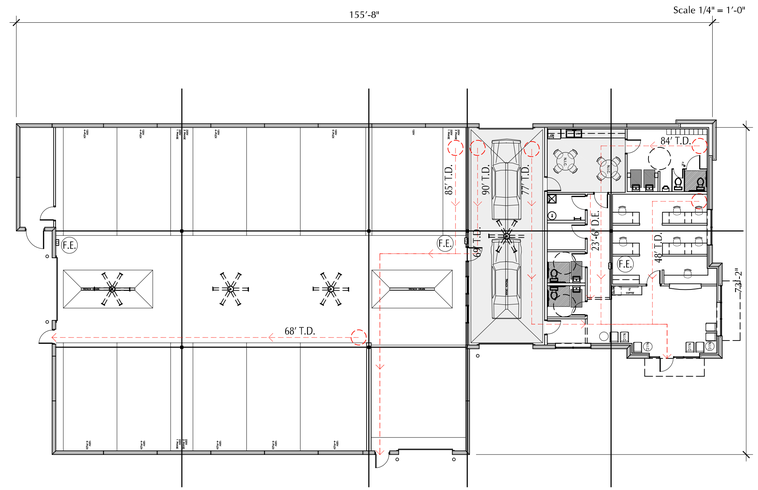
NO DRINKING FOUNTAIN REQUIRED
MAX. 15 EMPLOYEES ON SITE



ADA DETAILS 2

Scale 1/4" = 1'-0"

FIRE EXTINGUISHER SCHEDULE
EXTINGUSIHERS PER IFC TABLE 906.3(1)
FIRST FLOOR
GROUP S1 AREAS = 9,775 SF
9,775 / 3,000 = 3 REQUIRED 3 UNITS PROVIDED
75' TRAVEL DISTANCE MAX BETWEEN F.E.
4A 10lb CLASS ABC FIRE EXTINGUISHER IN CABINET. (F.E.)



LEGEND

INTERVENING SPACE
SECTION 1016.2(2)

T.D. TRAVEL DISTANCE
D.E. DEADEND (50' MAX)

FIRST FLOOR CODE PLAN 1

Scale 1/16" = 1'-0"

PLAN NOTES

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04-15-20

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CRASH CHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

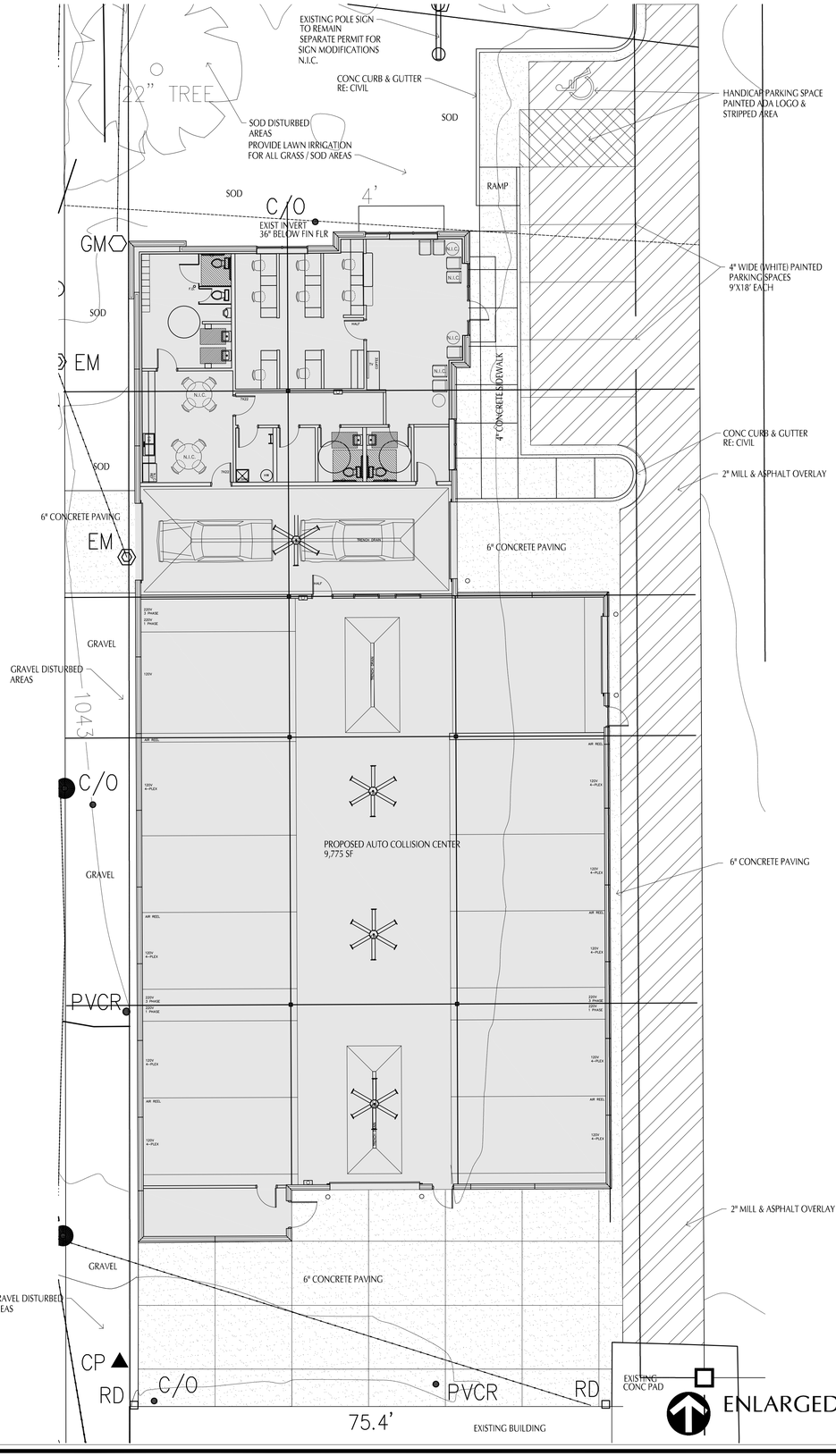
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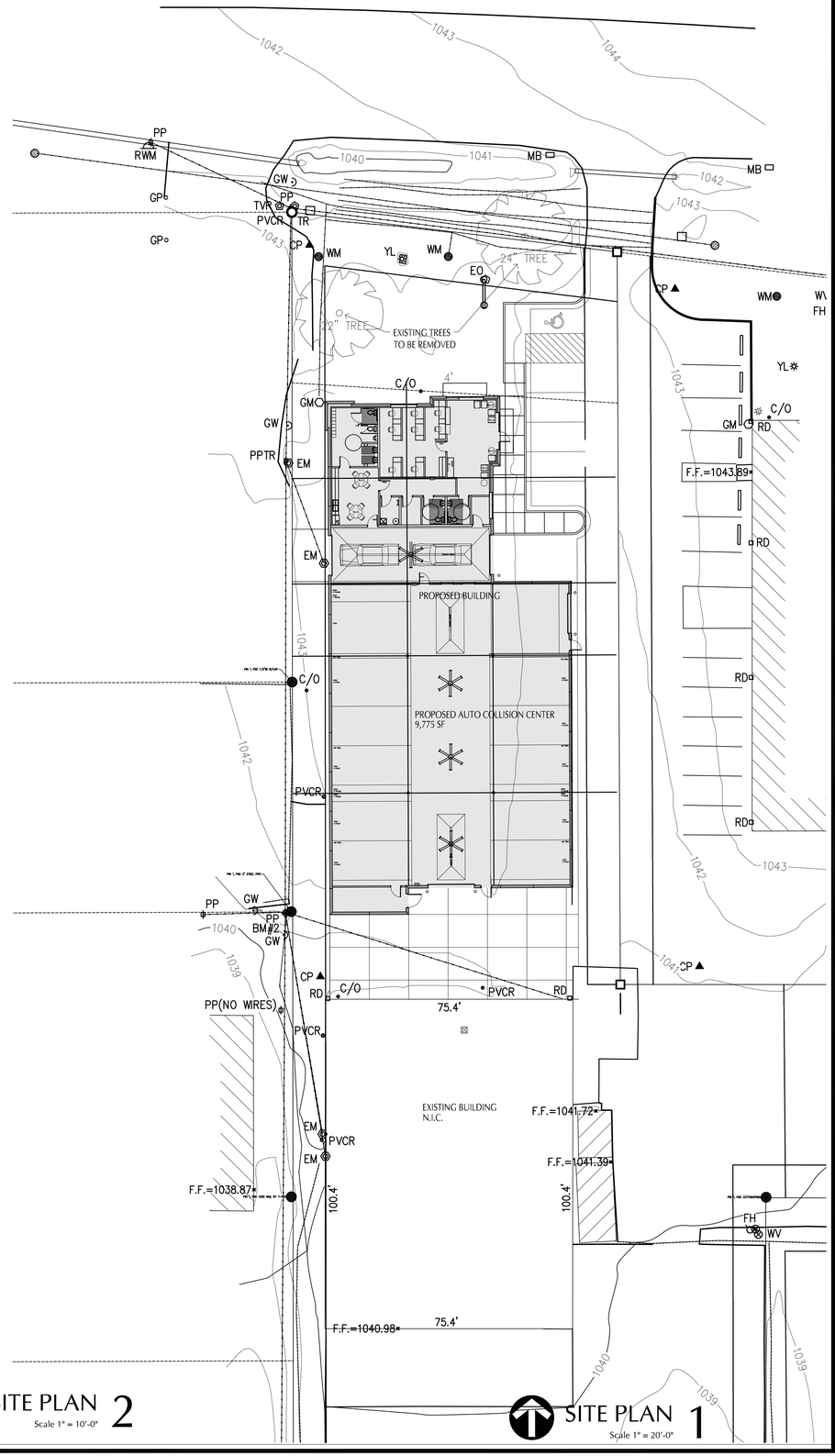
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C1.0

CODE REVIEW

Sep 17, 2021 - 3:39pm - USER ChrisB
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ENLARGED SITE PLAN 2
Scale 1" = 10'-0"



SITE PLAN 1
Scale 1" = 20'-0"

PLAN NOTES

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10/04/2021

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CRASH CHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE

PROJECT NUMBER 21009
DATE ISSUED: 10 / 04 / 21

SHEET NUMBER
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SITE PLAN

Oct 15, 2021 – 1:08pm – USER ChrisB
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CRASH CHAMPIONS
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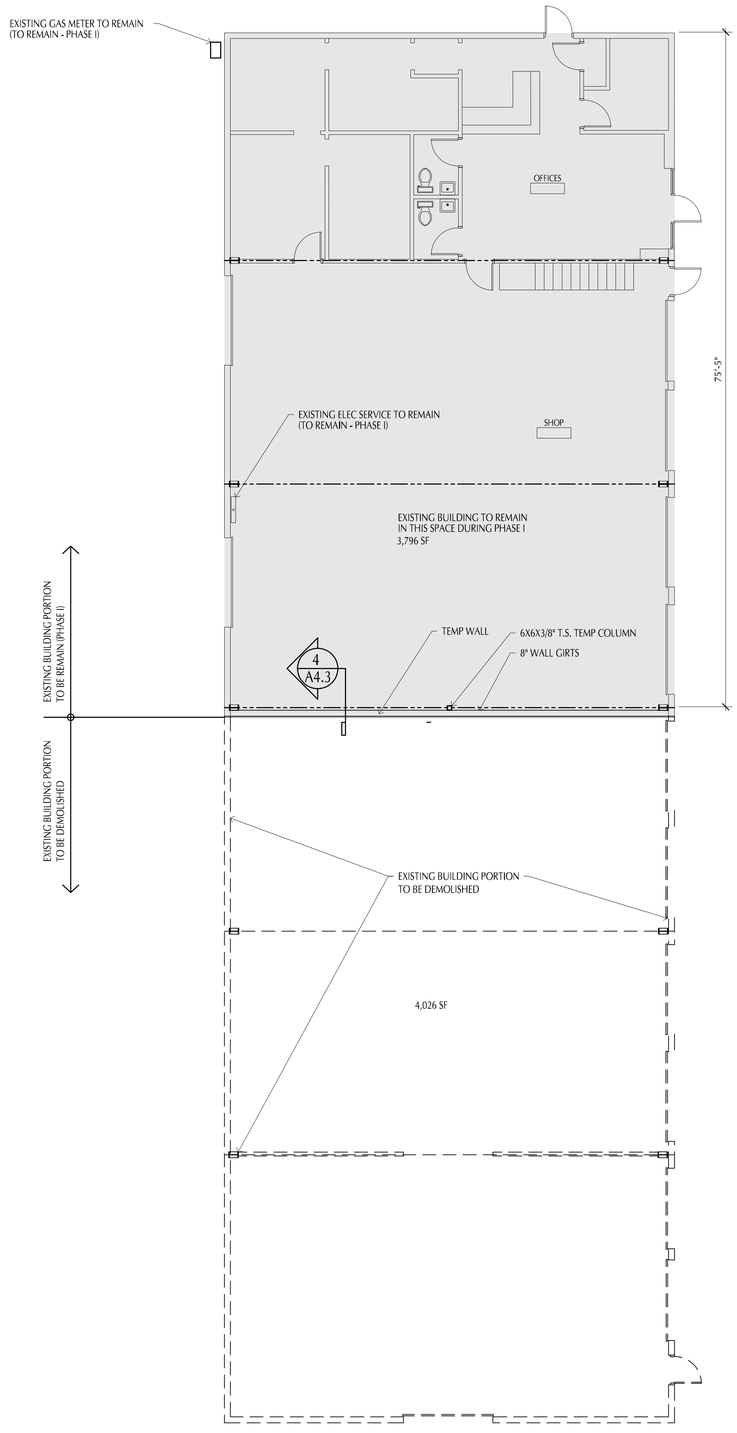
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NO.	DESCRIPTION	DATE

PROJECT NUMBER 21009
DATE ISSUED: 10 / 04 / 21

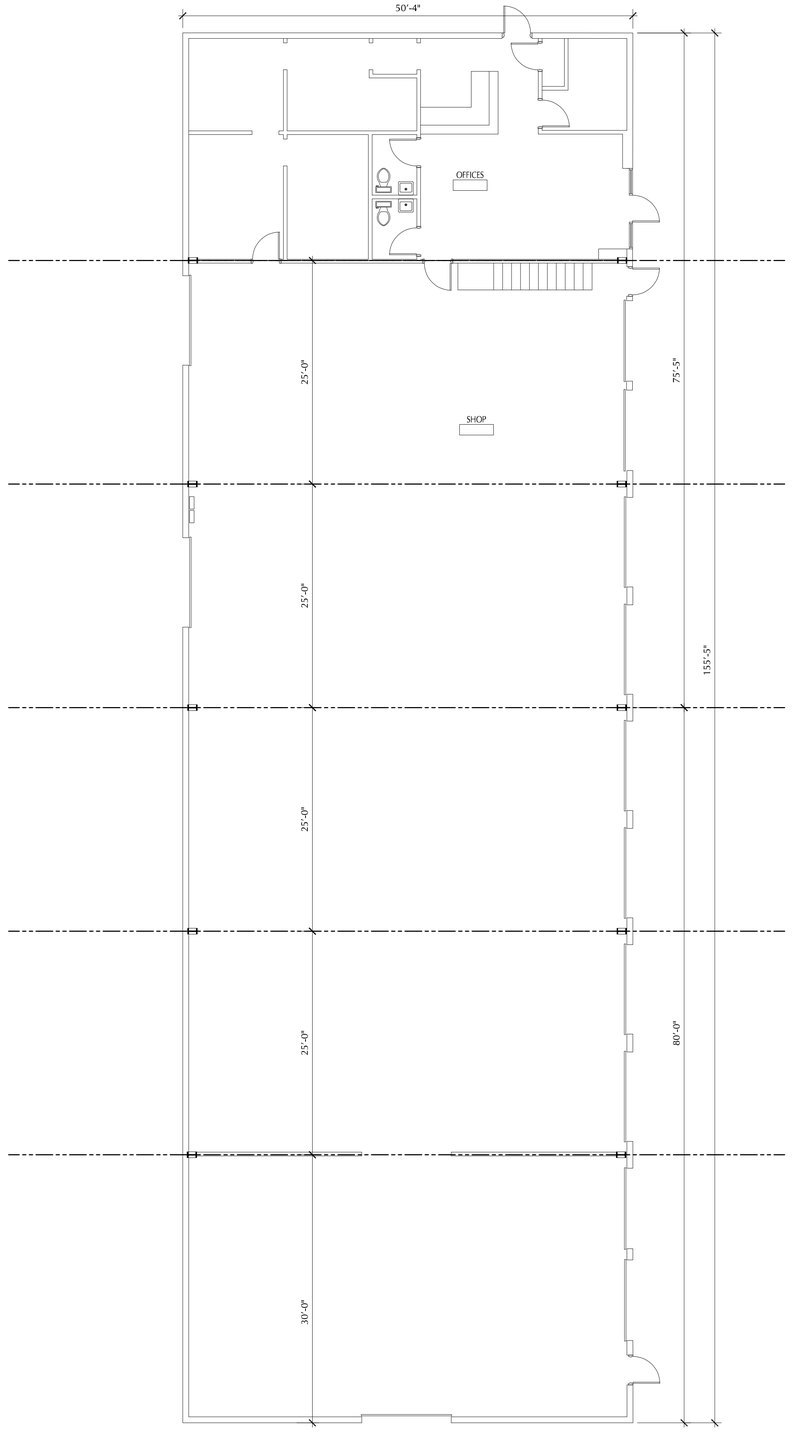
SHEET NUMBER
A1.1

SITE PLAN PHASES



PHASE ONE DEMOLITION FLOOR PLAN 2

Scale 1/8" = 1'-0"



EXISTING FLOOR PLAN 1

7,822 SF Scale 1/8" = 1'-0"

PLAN NOTES

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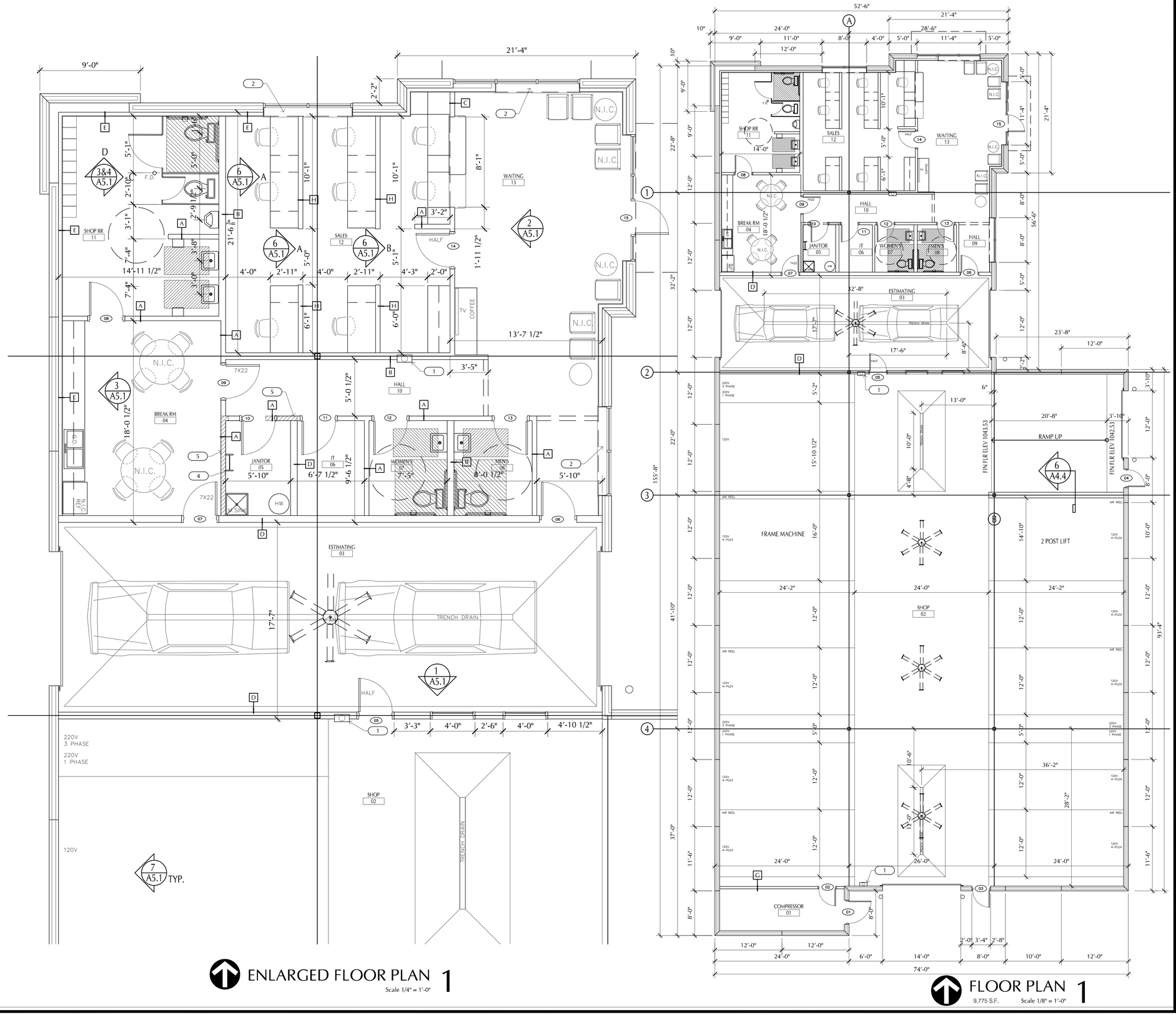
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DATE ISSUED: 10 / 04 / 21

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D1.0

DEMOLITION FLOOR PLAN

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ENLARGED FLOOR PLAN 1
Scale 1/4" = 1'-0"

FLOOR PLAN 1
9,775 S.F. Scale 1/8" = 1'-0"

PLAN NOTES

1. RECESSED CAB. & FIRE EXTINGUISHER 2A10BC
2. P.LAM WINDOW SILL W/ FURRED OUT WALL BELOW
3. OUTLINE OF CANOPY SHOWN DASHED
4. ROOF ACCESS STEEL LADDER
5. HATCHED WALLS, EXTEND TO BOTTOM OF ROOF DECK ABOVE

WALL TYPES

- A 5/8" GYP BD ON 3 5/8" 20 GA. METAL STUDS @ 16" O.C. W/ SOUND ATTENUATION INSULATION TO 12'-0" A.F.F.
- B 5/8" GYP BD ON 6" 20 GA. METAL STUDS @ 16" O.C. W/ SOUND ATTENUATION INSULATION TO 12'-0" A.F.F.
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- D 5/8" GYP BD ON 6" 20 GA. METAL STUDS 16" O.C. W/ SOUND ATTENUATION INSULATION TO STRUCTURE ABOVE
- E 5/8" GYP BD (ONE SIDE ONLY) ON 3 5/8" 20 GA. METAL STUDS @ 16" O.C. TO 12'-0" A.F.F.
- F 5/8" GYP BD (ONE SIDE ONLY) ON 3 5/8" 20 GA. METAL STUDS @ 16" O.C. TO 15'-0" A.F.F.
- G 5/8" SOUND REDUSCTION GYP BD ON 3 5/8" 20 GA. METAL STUDS 16" O.C. W/ SOUND ATTENUATION INSULATION TO STRUCTURE ABOVE
- H 5/8" GYP BD ON 3 5/8" 20 GA. METAL STUDS @ 16" O.C. TO 3'-6" A.F.F. W/ P.LAM CAP

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10/04/2021

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CRASH CHAMPIONS
COLLISION REPAIR TEAM

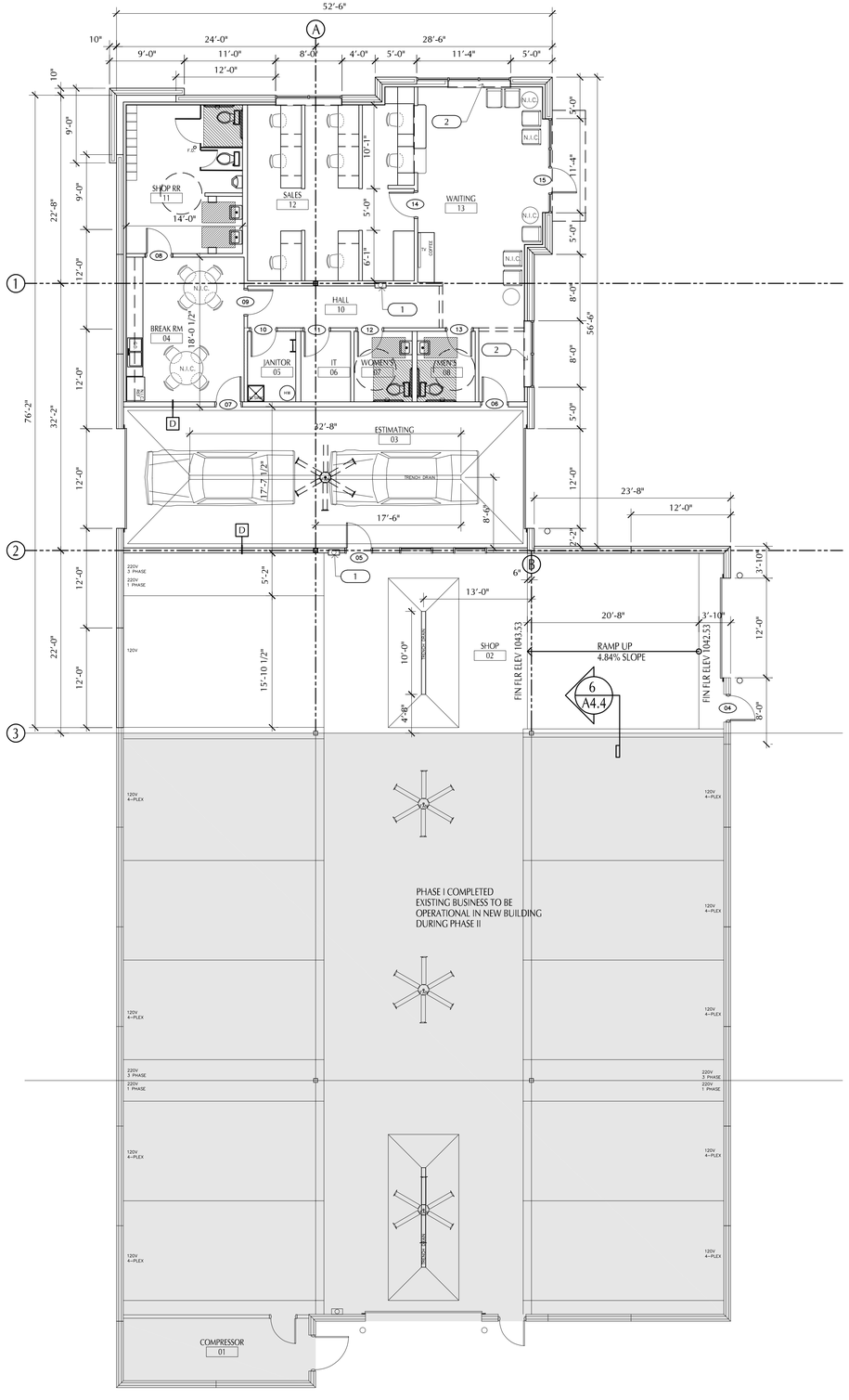
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451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE

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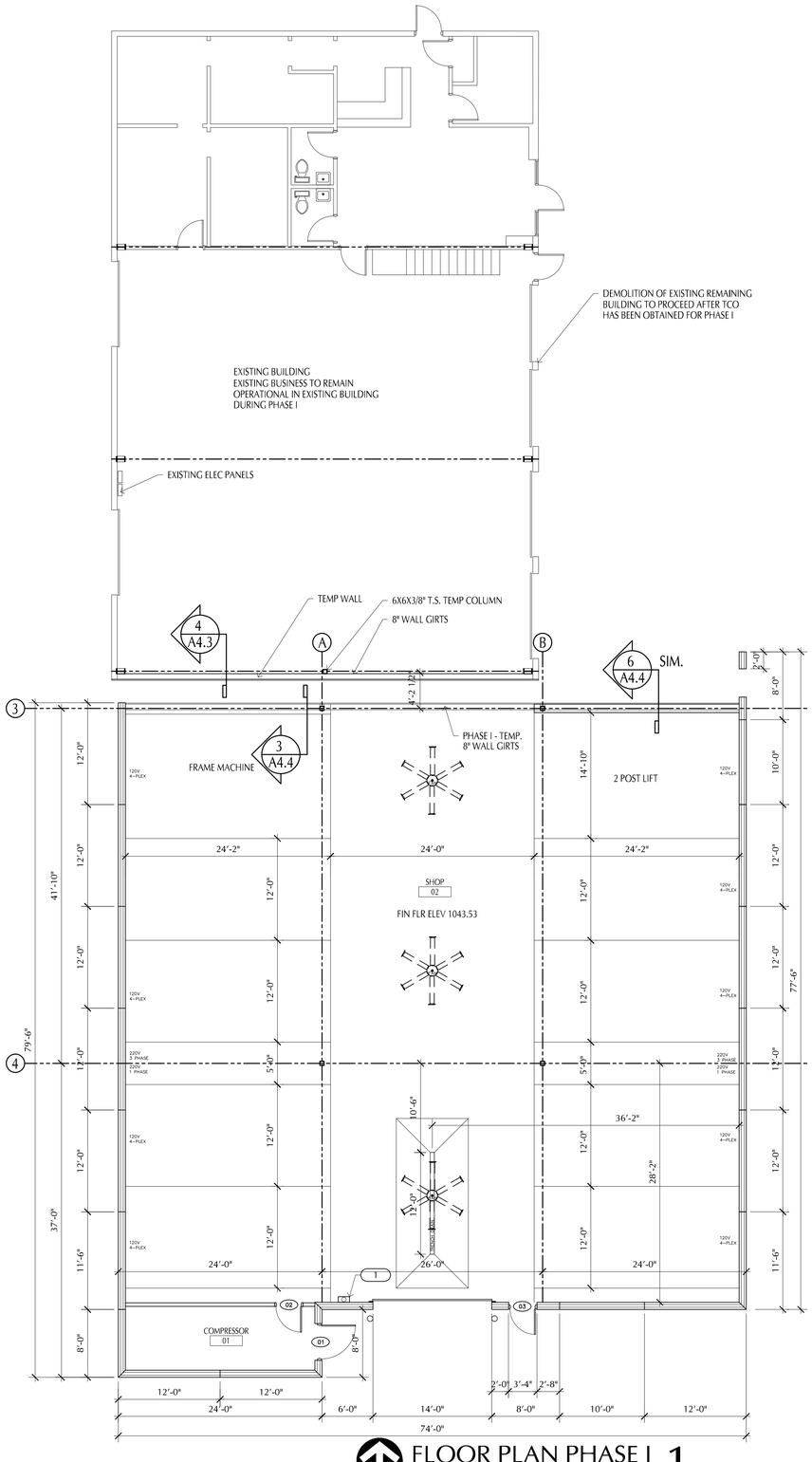
SHEET NUMBER
A2.0

FLOOR PLAN



FLOOR PLAN PHASE II 2

4,400 S.F. Scale 1/8" = 1'-0"



FLOOR PLAN PHASE I 1

5,375 S.F. Scale 1/8" = 1'-0"

PLAN NOTES

1. RECESSED CAB. & FIRE EXTINGUISHER 2A10BC
2. P.LAM WINDOW SILL W/ FURRED OUT WALL BELOW
3. OUTLINE OF CANOPY SHOWN DASHED
4. ROOF ACCESS STEEL LADDER

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- H 5/8" GYP BD ON 3 5/8" 20 GA. METAL STUDS @ 16" O.C. TO 4'-0" A.F.F. W/ HARD WOOD CAP, PAINTED

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CRASH CHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

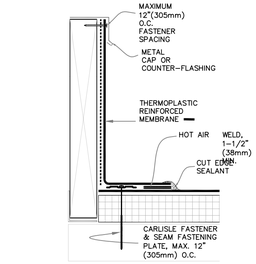
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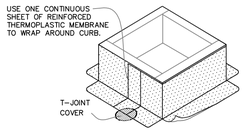
PROJECT NUMBER 21009
DATE ISSUED: 10 / 04 / 21

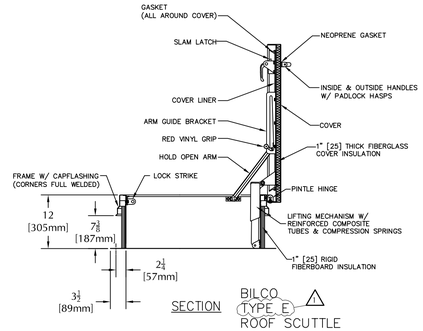
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FLOOR PLAN PHASES

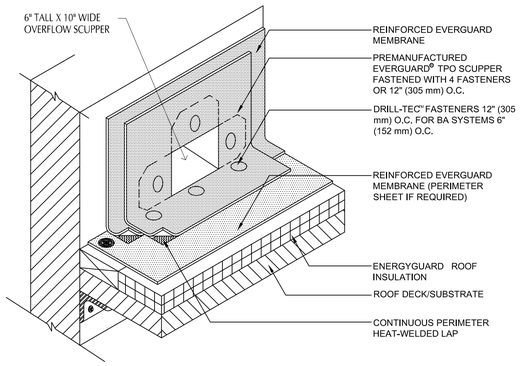
Oct 12, 2021 - 8:15am - USER ChrisB
T:\Rose\Drawings-Current\21009 Crash Champions Lee's Summit\Production\Planning & Zoning\Architectural\A2.1 FLOOR PLAN -phase I.dwg
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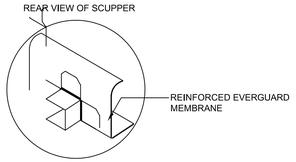


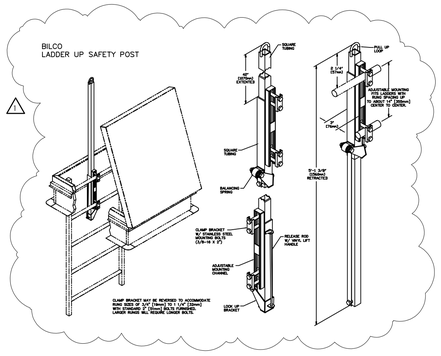


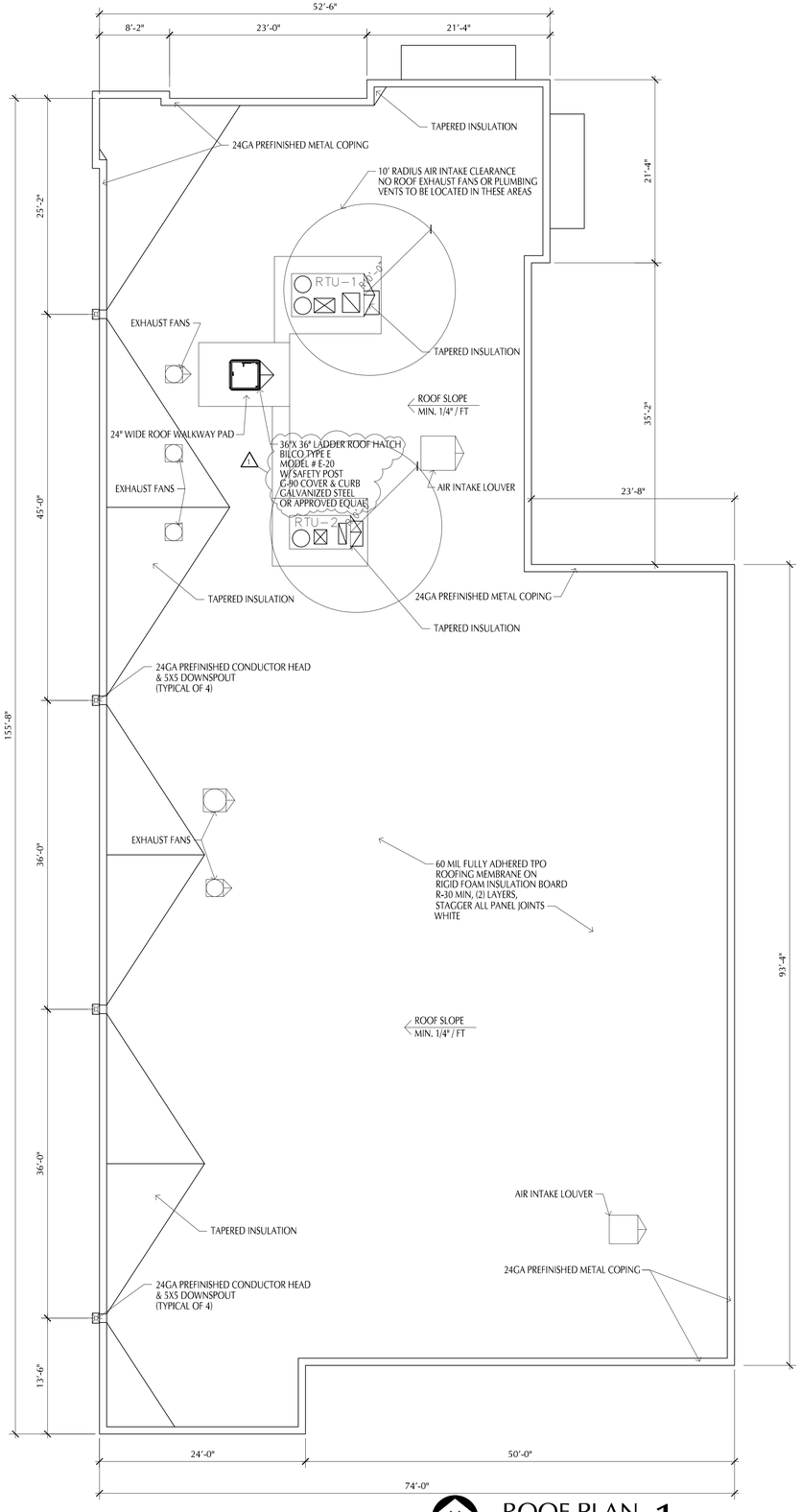


BILCO
TYPE E
ROOF SCUTTLE
OR APPROVED EQUAL









ROOF PLAN 1
Scale 1/8" = 1'-0"

PLAN NOTES

RIGID FOAM INSULATION BOARD SPEC:
GAF
ENERGYGUARD, 25 PSI
POLYISO INSULATION
GLASS FIBER-REINFORCED CELLULSIC
FELT FACERS
OR APPROVED EQUAL

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Christopher R. Bell

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CHRISTOPHER R. BELL
NUMBER A-6275
REGISTERED ARCHITECT

10/04/2021

CHRISTOPHER R. BELL - ARCHITECT
MO# A-6275

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MISSOURI STATE CERTIFICATE OF AUTHORITY # 2008034845
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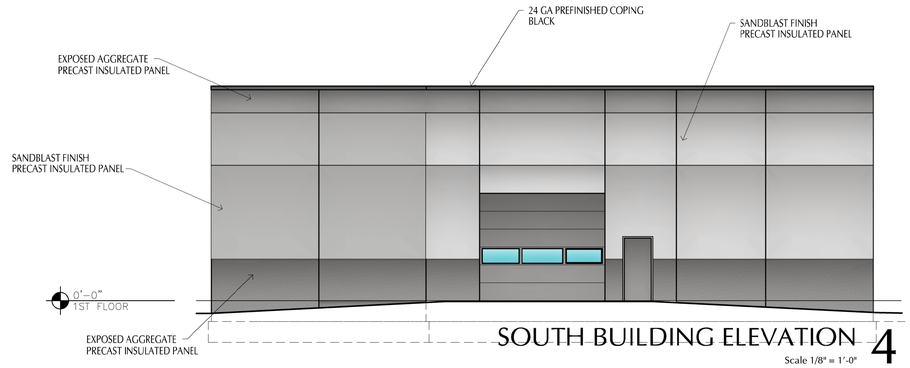
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PROJECT NUMBER 21009
DATE ISSUED: 10 / 04 / 21

SHEET NUMBER
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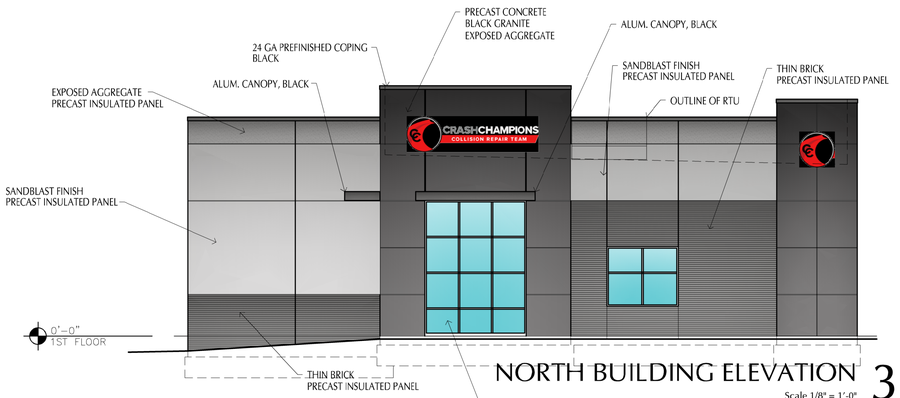
ROOF PLAN

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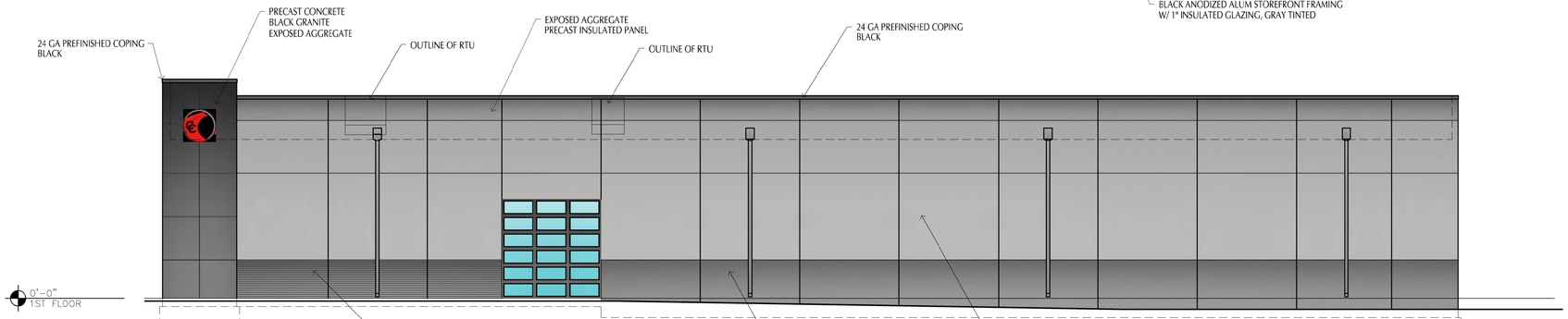
SOUTH BUILDING ELEVATION 4

Scale 1/8" = 1'-0"



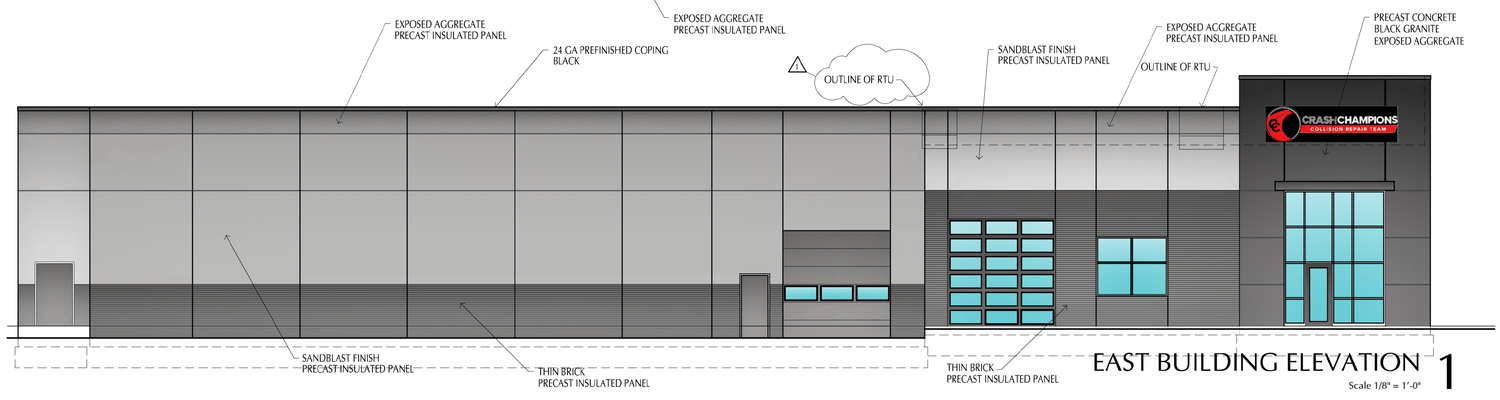
NORTH BUILDING ELEVATION 3

Scale 1/8" = 1'-0"



WEST BUILDING ELEVATION 2

Scale 1/8" = 1'-0"



EAST BUILDING ELEVATION 1

Scale 1/8" = 1'-0"

PLAN NOTES



EXPOSED AGGREGATE
OMEGA CONCRETE PRECAST INSULATED WALL PANEL
COLOR: BLACK GRANITE



SANDBLAST EXPOSED AGGREGATE

OMEGA CONCRETE PRECAST INSULATED WALL PANEL
COLOR: GREY



UTILITY SIZE THINBRICK
ENDICOTT BRICK COMAPNY
VC8 - GLAZED BLACK
VELOUR TEXTURE

NOTES:
1. PAINT EXTERIOR SIDE OF OVERHEAD SECTIONAL DOORS ONLY, MATCH COLOR OF PRECAST
2. PAINT EXTERIOR H.M. DOORS AND FRAMES MATCH COLOR OF PRECAST
3. PROVIDE KNOX BOX, LOCATION TO BE DETERMINED BY FIRE DEPARTMENT

CANOPY SPECIFICATION:
MAPES ARCHITECTURAL CANOPIES
SUPER LUMIDECK
12" SMOOTH EXTRUDED FASCIA EXTENSION
W/ DOWNSPOUT
2 COAT KYNAR FINISH

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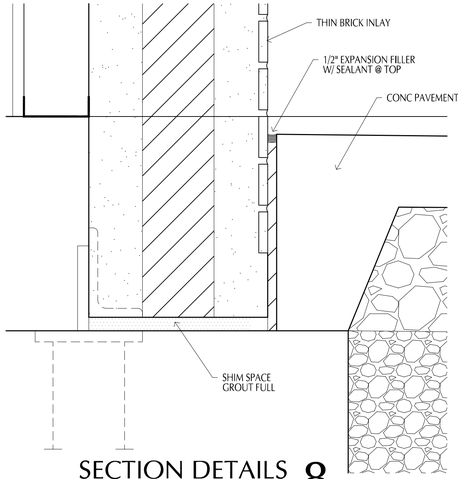
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1	CITY REVIEW COMMENTS	11-10-21

PROJECT NUMBER 21009
DATE ISSUED: 10 / 04 / 21

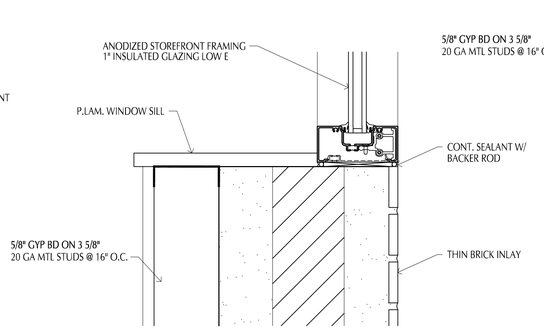
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BUILDING ELEVATIONS

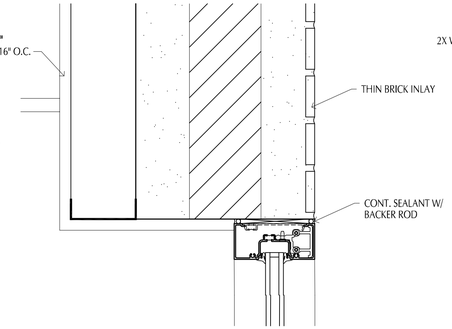
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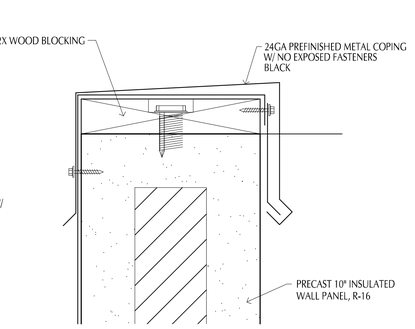
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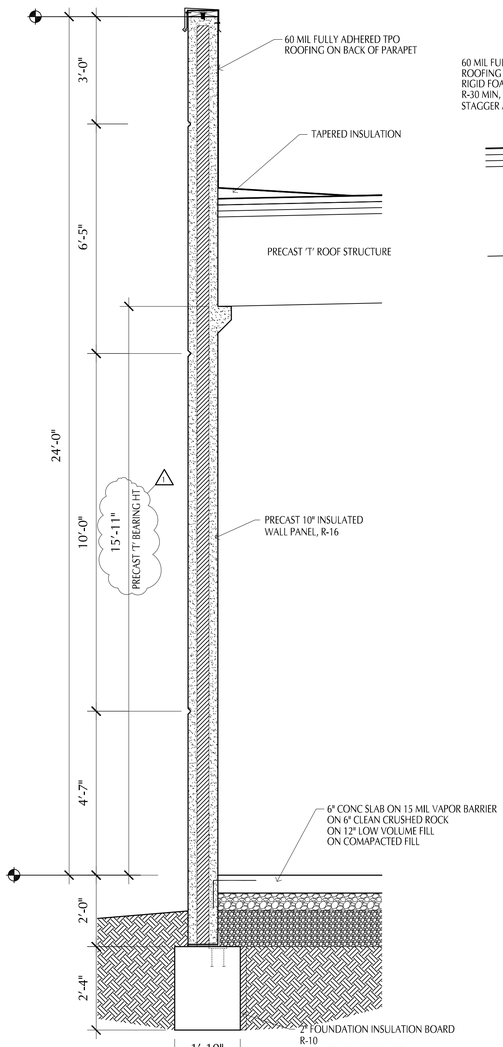
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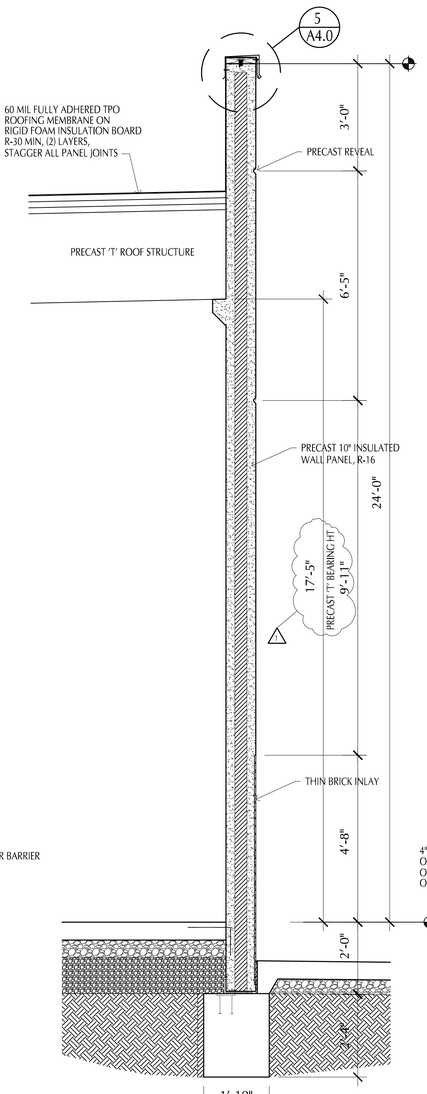
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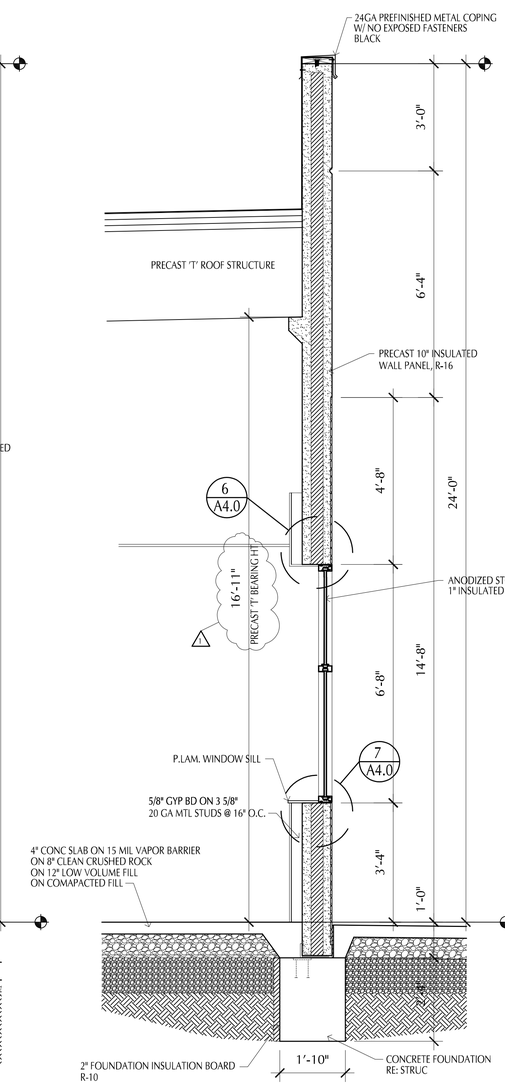
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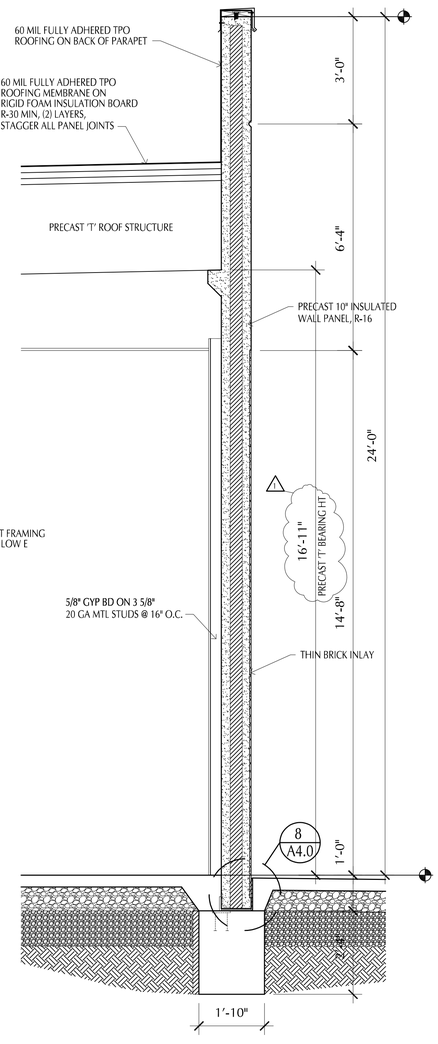
WALL SECTION 4
Scale 1/2" = 1'-0"



WALL SECTION 3
Scale 1/2" = 1'-0"



WALL SECTION 2
Scale 1/2" = 1'-0"



WALL SECTION 1
Scale 1/2" = 1'-0"

PLAN NOTES

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Christopher R. Bell

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CHRISTOPHER R. BELL
NUMBER
A-6275
REGISTERED ARCHITECT

10/04/2021

CHRISTOPHER R. BELL - ARCHITECT
MO# A-6275

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P.O. BOX 100 OLATHE, KS 66051
MISSOURI STATE CERTIFICATE OF AUTHORITY # 2008034845
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CRASH CHAMPIONS
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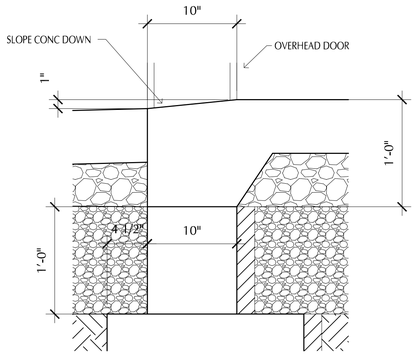
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PROJECT NUMBER 21009
DATE ISSUED: 10 / 04 / 21

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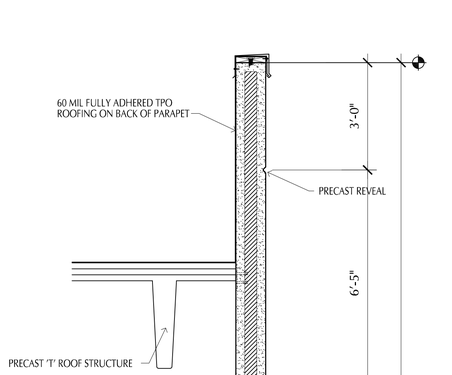
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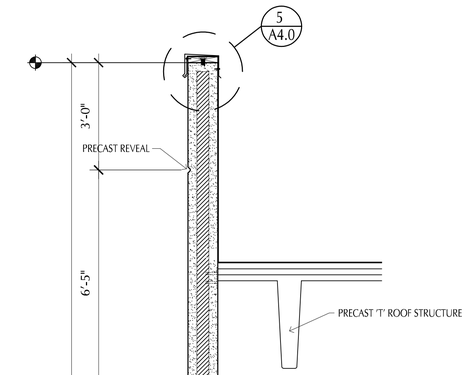
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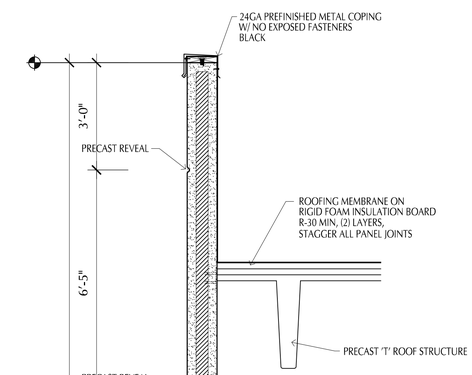
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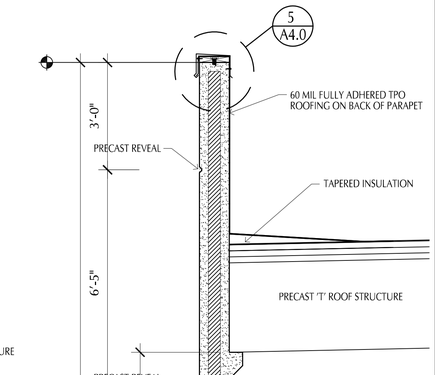
WALL SECTION 3

Scale 1/2" = 1'-0"



WALL SECTION 2

Scale 1/2" = 1'-0"



WALL SECTION 1

Scale 1/2" = 1'-0"

PLAN NOTES

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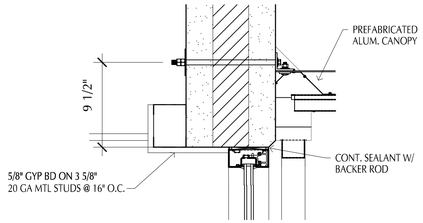
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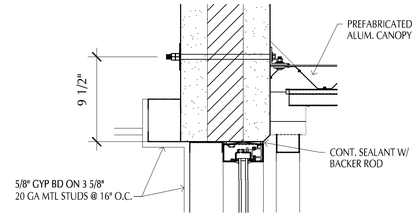
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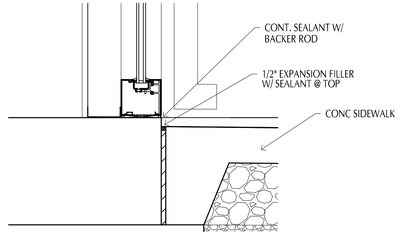
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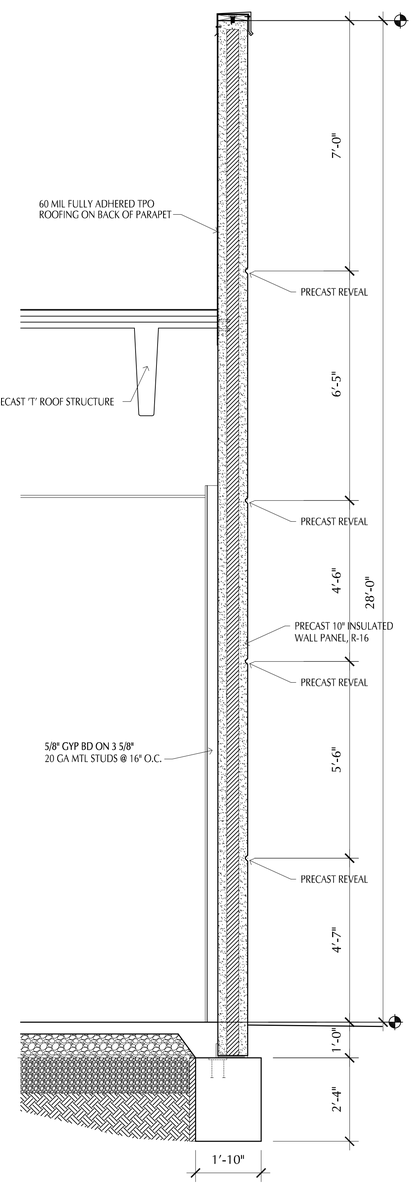
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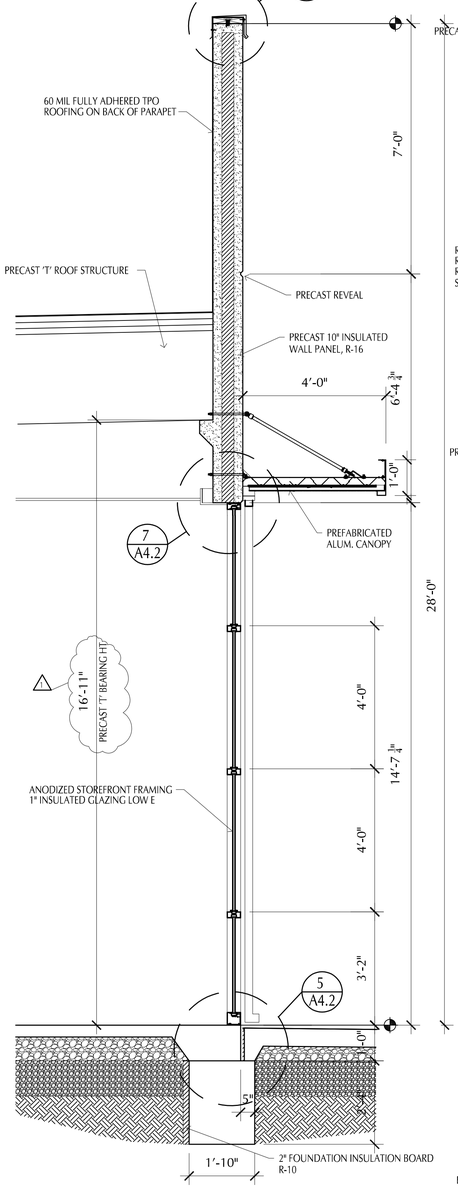


SECTION DETAILS 7
Scale 1 1/2" = 1'-0"



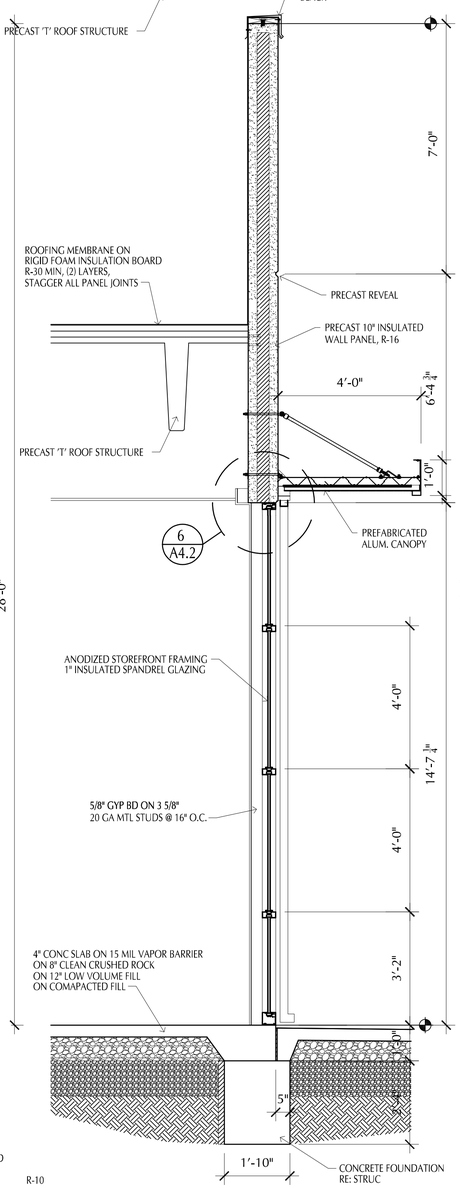
WALL SECTION 4
Scale 1/2" = 1'-0"

SECTION DETAILS 6
Scale 1 1/2" = 1'-0"

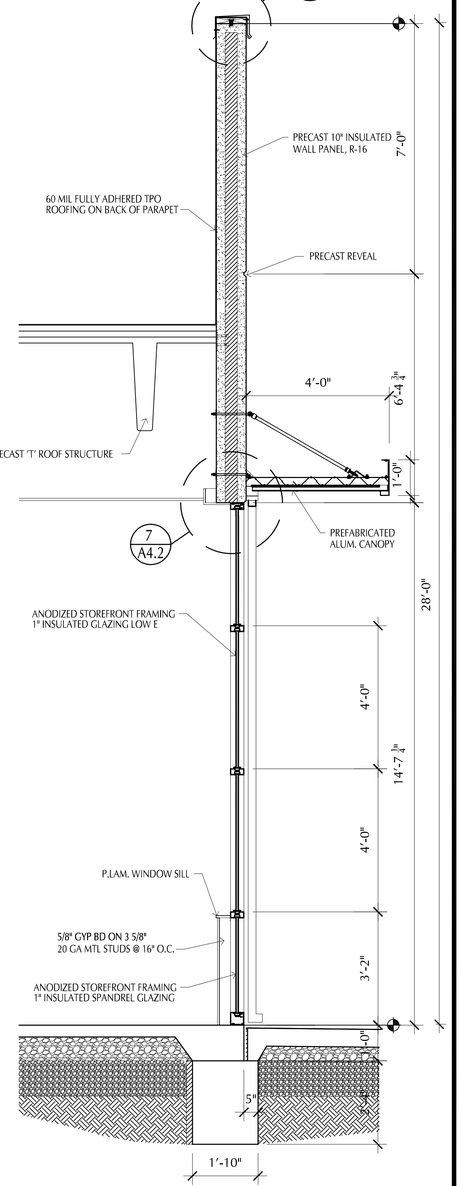


WALL SECTION 3
Scale 1/2" = 1'-0"

SECTION DETAILS 5
Scale 1 1/2" = 1'-0"



WALL SECTION 2
Scale 1/2" = 1'-0"



WALL SECTION 1
Scale 1/2" = 1'-0"

R-10

PLAN NOTES

DISCLAIMER
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Christopher R. Bell
STATE OF MISSOURI
CHRISTOPHER R. BELL
NUMBER A-6275
REGISTERED ARCHITECT
10/04/2021
CHRISTOPHER R. BELL - ARCHITECT
MO# A-6275

ROSE DESIGN GROUP INC
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A Division of Rose Design Build
913-782-0777 FAX: 913-782-0998
P.O. BOX 100 OLATHE, KS 66051
MISSOURI STATE CERTIFICATE OF AUTHORITY # 2008034845
www.BuildWithRose.com

CRASH CHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

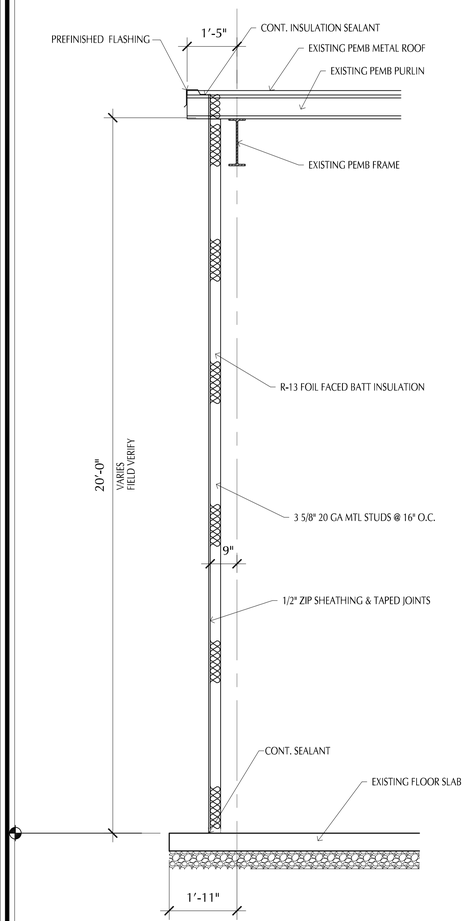
NO.	DESCRIPTION	DATE
1	CITY REVIEW COMMENTS	11-10-21

PROJECT NUMBER 21009
DATE ISSUED: 10 / 04 / 21

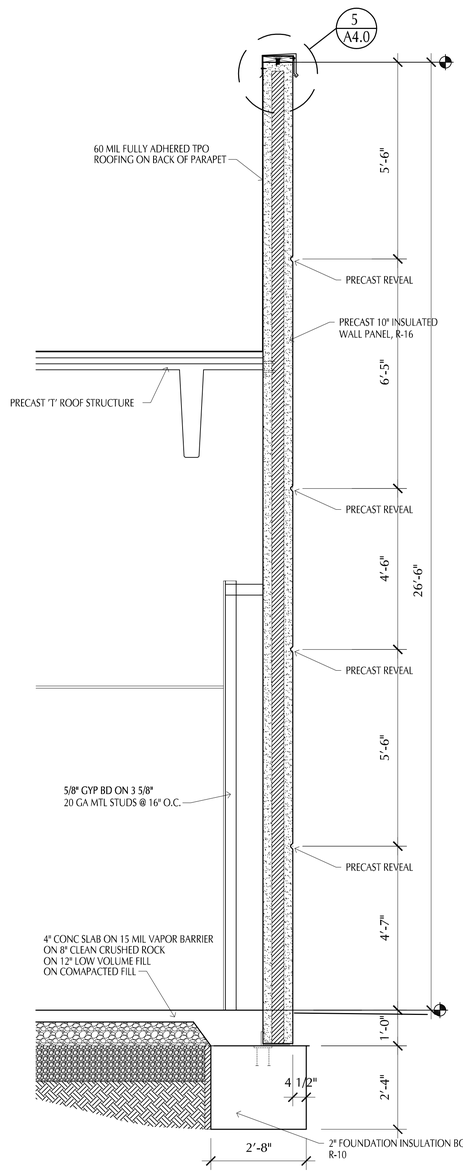
SHEET NUMBER
A4.2

WALL SECTIONS

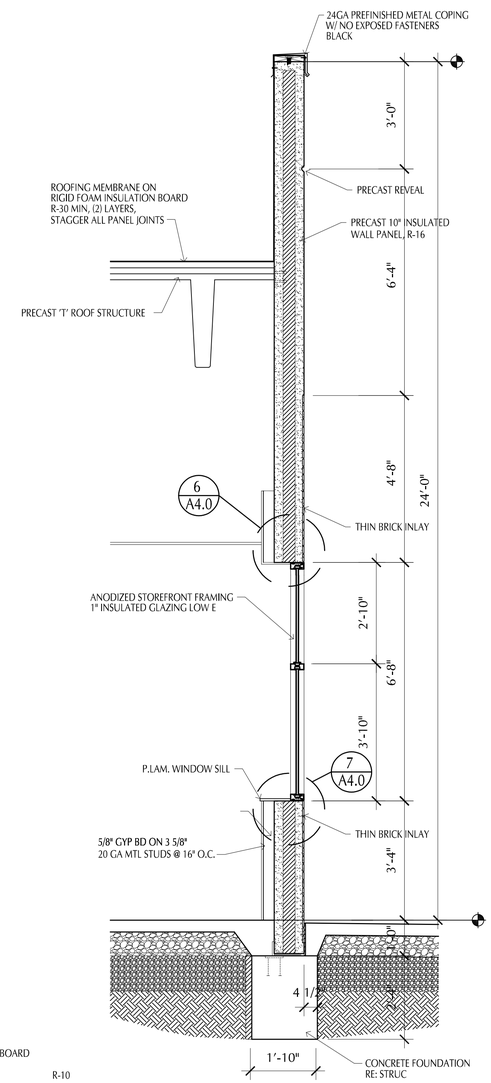
Nov 12, 2021 - 10:41am - USER ChrisB
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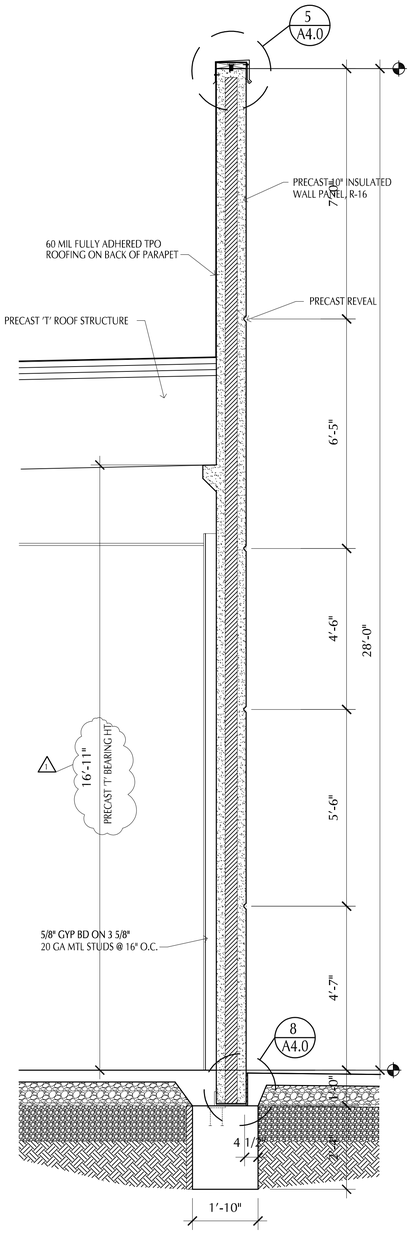
WALL SECTION 4
EXISTING BLDG INFILL WALL Scale 1/2" = 1'-0"



WALL SECTION 3
Scale 1/2" = 1'-0"



WALL SECTION 2
Scale 1/2" = 1'-0"



WALL SECTION 1
Scale 1/2" = 1'-0"

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10/04/2021

CHRISTOPHER R. BELL - ARCHITECT
MO# A-6275

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CRASH CHAMPIONS
COLLISION REPAIR TEAM

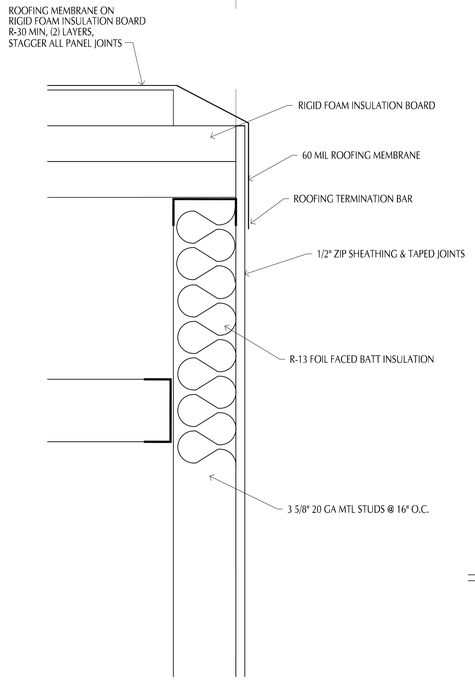
PROPOSED BUILDING FOR:
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451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
1	CITY REVIEW COMMENTS	11-10-21

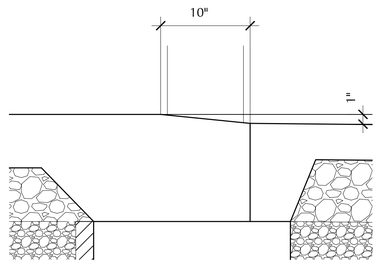
PROJECT NUMBER 21009
DATE ISSUED: 10 / 04 / 21

SHEET NUMBER
A4.3

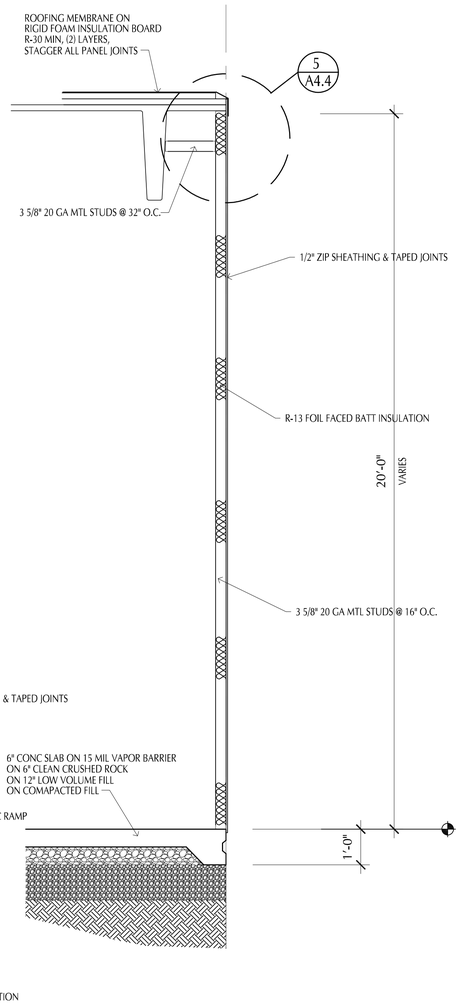
WALL SECTIONS

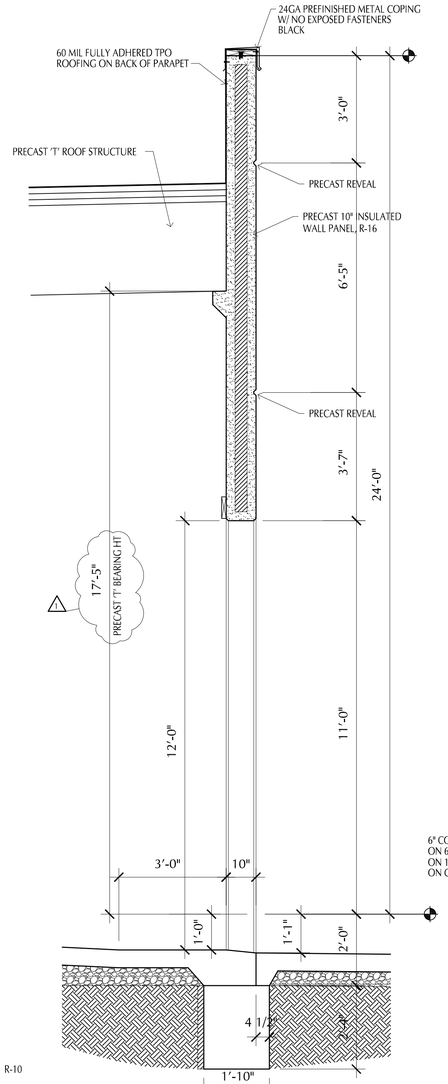


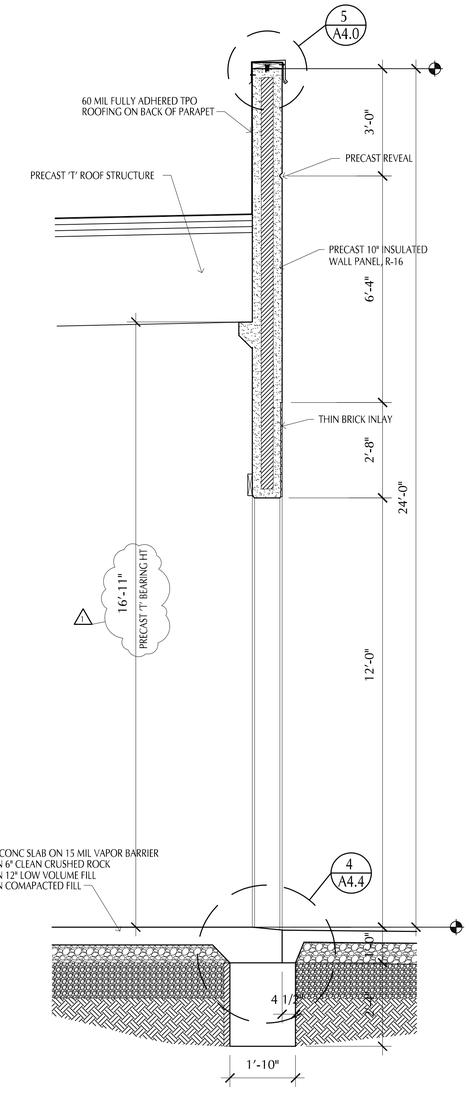
SECTION DETAIL 5
Scale 3" = 1'-0"

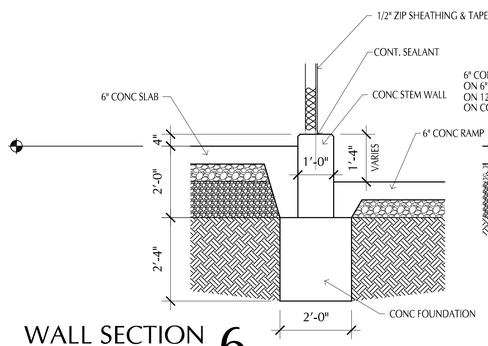


SECTION DETAIL 4
OVERHEAD DOOR SILL Scale 1 1/2" = 1'-0"









WALL SECTION 6
RAMP SECTION Scale 1/2" = 1'-0"

WALL SECTION 3
TEMP WALL SECTION Scale 1/2" = 1'-0"

WALL SECTION 2
Scale 1/2" = 1'-0"

WALL SECTION 1
Scale 1/2" = 1'-0"

R-10

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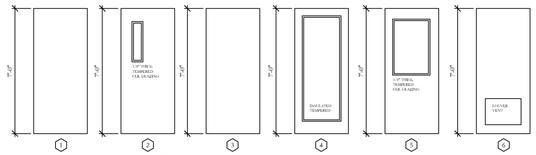
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WALL SECTIONS

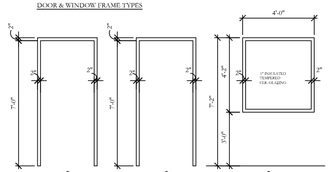
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DOOR TYPES



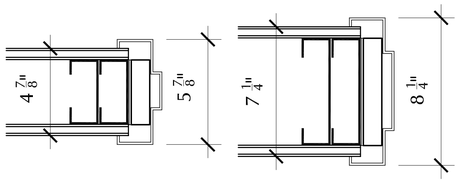
1 SOLID CORE PREFINISHED LAMINATED MAHOGANY
2 SOLID CORE PREFINISHED LAMINATED MAHOGANY
3 H.M. 16 GA INSULATED GALVANIZED PRIME & PAINTED
4 STOREFRONT ALUM. MEDIUM STYLE ANODIZED BLACK
5 SOLID CORE PREFINISHED LAMINATED MAHOGANY
6 SOLID CORE PREFINISHED LAMINATED MAHOGANY

DOOR & WINDOW FRAME TYPES



A HOLLOW METAL FRAME 18 GAUGE PRIME & PAINT, BLACK K/D
B HOLLOW METAL FRAME 16 GAUGE G.M.VANIZED PRIMED & PAINTED BLACK WELDED / EOA
C HOLLOW METAL FRAME 18 GAUGE PRIME & PAINT, BLACK WELDED TYP OF 2

LAMINATED WOOD DOORS:
LYNDEN DOOR
PACIFIC COLLECTION
COLOR: MAGENTA #60
SPECIES-QS AFRICAN MAHOGANY
OR APPROVED EQUAL



DOOR DETAILS 2
Scale 3" = 1'-0"

DOOR SCHEDULE

DOOR NO.	DOOR SIZE	DETAILS HEAD	DETAILS JAMB	DOOR TYPE	FRAME TYPE	RATING MIN.	HRDW	REMARKS
01	4' X 7' X 1 3/4"		2C/A5.0	3	B		1	3
02	3' X 7' X 1 3/4"		2A/A5.0	3	A		4	1, 2
03	3' X 7' X 1 3/4"		2C/A5.0	3	B		1	3
04	3' X 7' X 1 3/4"		2C/A5.0	3	B		1	3
05	3' X 7' X 1 3/4"		2B/A5.0	5	A		4	
06	3' X 7' X 1 3/4"			4			5	STOREFRONT DOOR 4
07	3' X 7' X 1 3/4"		2B/A5.0	2	A		4	
08	3' X 7' X 1 3/4"		2A/A5.0	1	A		8	
09	3' X 7' X 1 3/4"		2A/A5.0	2	A		4	
10	3' X 7' X 1 3/4"		2A/A5.0	1	A		4	
11	3' X 7' X 1 3/4"		2A/A5.0	6	A		2	
12	3' X 7' X 1 3/4"		2A/A5.0	1	A		3	
13	3' X 7' X 1 3/4"		2A/A5.0	1	A		3	
14	3' X 7' X 1 3/4"		2A/A5.0	5	A		4	
15	3' X 7' X 1 3/4"			4			1	STOREFRONT DOOR 4

HARDWARE SCHEDULE

HARDWARE SET 1 US32D
3 EA BB NRP HINGES (4.5X4.5)
1 EA PANIC HARDWARE
1 EA THRESHOLD 3/0
1 EA SWEEP
1 EA WEATHERSTRIP 3/0 X 7/0
1 EA ALUM CLOSER

HARDWARE SET 2 US32D
3 EA HINGES (4.5X4.5)
1 EA LEVER OFFICE LOCK
1 EA WALL STOP

HARDWARE SET 3 US32D
3 EA HINGES (4.5X4.5)
1 EA LEVER PRIVACY
1 WALL STOP

HARDWARE SET 4 US32D
3 EA HINGES (4.5X4.5) US32D
1 EA PASSAGE SET
1 WALL STOP

HARDWARE SET 5 US32D
3 EA BB HINGES (4.5X4.5)
1 EA PUSH / PULL
1 EA CLOSURE
1 EA WALL STOP

HARDWARE SPECS:
DOOR LEVER: CAL-ROYAL PIONEER SL SERIES (SL)
OR APPROVED EQUAL
CLOSURES: LCN 4040 SERIES
APPROVED EQUAL: CAL-ROYAL 900 SERIES

PANIC HARDWARE: VON DUPRIN #9848
APPROVED EQUAL: CAL-ROYAL 9800 RIM TYPE
SHALL MEET REQUIRMENTS PER IBC SECTION 1008.1.10

INTERIOR HINGES:
STANDARD WEIGHT BALL BEARING CONCEALED

EXTERIOR HINGES:
HEAVY WEIGHT BALL BEARING CONCEALED

ALL COMMERCIAL HARDWARE GRADE LEVEL 1

REMARK NOTES:
1. STC 35 RATED DOOR
2. 8" TALL KICK PLATE
3. OIL BASED PRIMER FOR EXTERIOR DOOR AND FRAME

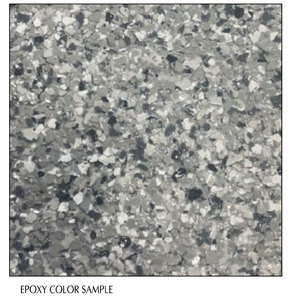
FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS SOUTH	WALLS EAST	WALLS WEST	CLG	CEILING HEIGHT	NOTES
01	COMPRESSOR	F5	B1	W1	W1	W1	W1	C3		B1 GYP BD WALLS ONLY
02	SHOP	F5	B1	W2	W2	W2	W2	C3		B1 GYP BD WALLS ONLY
03	ESTIMATING	F2	B2	W2	W2	W2	W2	C3		
04	BREAK ROOM	F1	B1	W5	W5	W5	W5	C2	9'-0"	
05	JANITOR	F5	B1	W5	W5	W5	W5			4
06	IT	F1	B1	W5	W5	W5	W5	C2	8'-0"	
07	WOMEN'S	F4	B3	W4	W4	W4	W4	C1	8'-0"	
08	MEN'S	F4	B3	W4	W4	W4	W4	C1	8'-0"	
09	HALL	F1	B1	W2	W2	W2	W2	C1	10'-6"	
10	HALL	F1	B1	W2	W2	W2	W2	C1	8'-0"	
11	SHOP RESTROOM	F2	B2	W3	W3	W3	W3	C2	9'-0"	48" EPOXY WAINSCOT
12	SALES	F3	B1	W5	W5	W5	W5	C1	10'-6"	
13	WAITING	F4	B3	W5	W5	W5	W5	C1	14'-8"	

FINISH LEGEND

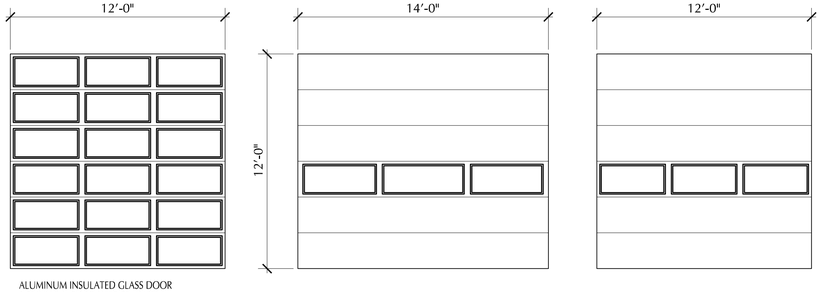
SYMBOL	PRODUCT	MANUFACTURER	PRODUCT / COLOR	NOTES
FLOORING				
F1	LVT	PATCRAFT	TIMBER GROVE II 05012 SHADY GROVE 7"X48" 20MIL	3
F2	EPOXY FLOOR	DUR-A-FLEX SHOP FLOOR	DOUBLE BROADCAST - GRAY SPECKLED	
F3	CARPET TILE	MOHAWK INDUSTRIES	BELGRADE - BRILLIANTLY EXCELLENT - 24X24	2
F4	CERAMIC TILE	AMERICAN OLEAN	UNION INDUSTRIAL GRAY UN03	3
F5	SEALED CONCRETE	PROSOCO	CONSOLDECK-SB & LS SYSTEMS W/ JOINT FILLER	3
WALLS				
W1	PAINT	S.W. PROMAR 400 EGGSHELL	SW 7622 HOMBURG GRAY	
W2	PAINT - TWO COLORS	S.W. PROMAR 400 EGGSHELL	SW 7622 HOMBURG GRAY & SW 7004 SNOWBOUND	
W3	EPOXY & PAINT	S.W. PRO INDUSTRIAL EPOXY	SW 7004 SNOWBOUND	
W4	CERAMIC TILE & PAINT	S.W. PROMAR 400 EGGSHELL	SW 7653- SILVERPOINTE	1
W5	PAINT	S.W. PROMAR 400 EGGSHELL	SW 7016 MINDFUL GREY	
BASE				
B1	4" RUBBER BASE	ROPPE	700 SERIES, 129 DOLPHIN	
B2	6" EPOXY COVE BASE			
B3	CERAMIC TILE			
CEILING				
C1	2X2 ACOUSTICAL TILE	ARMSTRONG	ULTIMA BEVELED TEGULAR 1911A	
C2	2X4 ACOUSTICAL TILE	ARMSTRONG	ULTIMA BEVELED TEGULAR 1913HRC	
C3	PAINT	S.W. PROMAR 400 EGGSHELL	SW 7004 SNOWBOUND	

NOTES:
1. CERAMIC WALL TILE SIZE: 12" X 24" X 1/4",TROVATA - DIARY, MANUF: EMSER, PAINT ABOVE, GROUT: MAPEI, COLOR: T.B.D.
2. QUARTER TURN INSTALLATION
3. PROVIDE TRANSITION STRIPS WHERE REQUIRED
4. FRP WALL PANELS 48" WIDE X 96" TALL, TWO PANELS AT JANITOR SINK, GRAY, EDGE TRIM
5. DOOR FRAME COLOR: SW MATCH RUBBER BASE - DOLPHIN - EGGSHELL



EPOXY COLOR SAMPLE

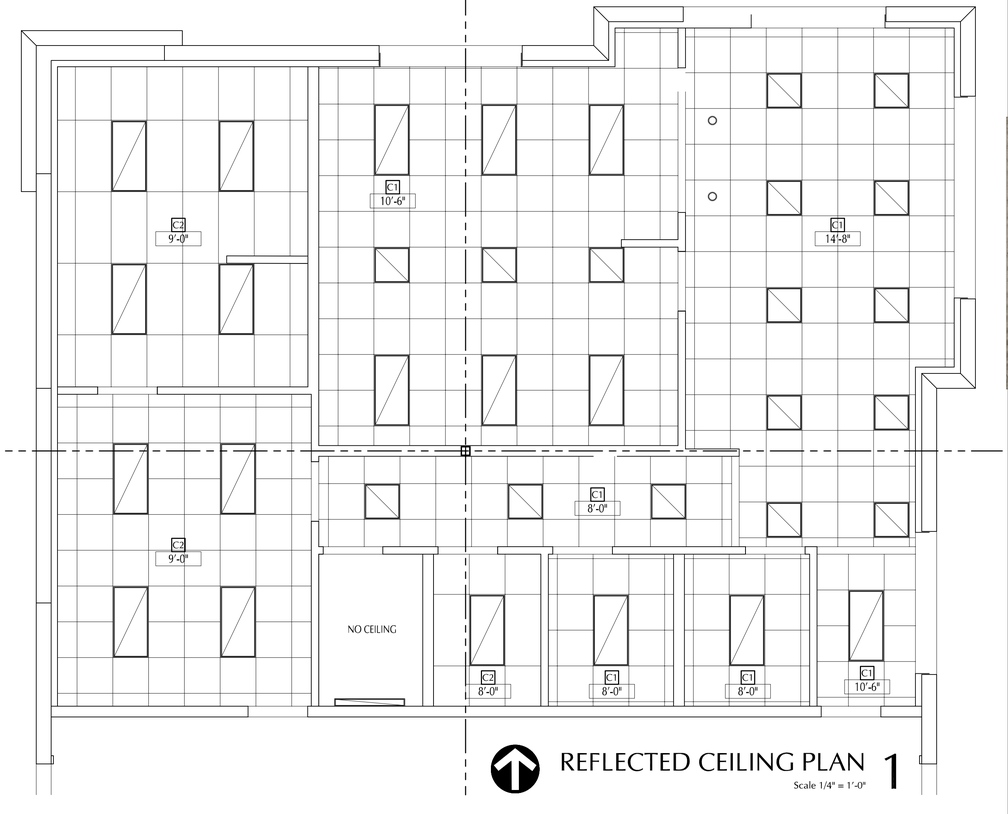
NOTE:
PROVIDE MAX LIFT ON ALL OVERHEAD DOOR TRACKS



ALUMINUM INSULATED GLASS DOOR
1/2" INSULATED GLASS & 3" TRACK
INSULATED STYLES & RAILS R 4.1
OVERHEAD DOOR COMPANY MODEL NO 521
EXTERIOR POWDER COATED (BLACK)
W/ ELECTRIC OPERATOR & BOTTOM SENSING EDGE
OR APPROVED EQUAL
2 TOTAL

PREFINISHED STEEL INSULATED DOOR
2" 20GA STEEL PANEL R 7.35
OVERHEAD DOOR COMPANY MODEL NO 422
W/ ELECTRIC OPERATOR & BOTTOM SENSING EDGE
OR APPROVED EQUAL
1 TOTAL
PAINT EXTERIOR FACE TO MATCH PRECAST

PREFINISHED STEEL INSULATED DOOR
2" 20GA STEEL PANEL R 7.35
OVERHEAD DOOR COMPANY MODEL NO 422
W/ ELECTRIC OPERATOR & BOTTOM SENSING EDGE
OR APPROVED EQUAL
1 TOTAL
PAINT EXTERIOR FACE TO MATCH PRECAST



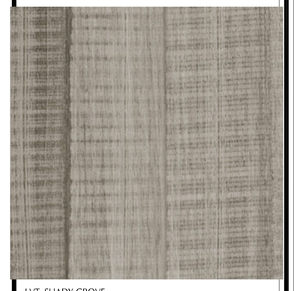
REFLECTED CEILING PLAN 1
Scale 1/4" = 1'-0"

PLAN NOTES

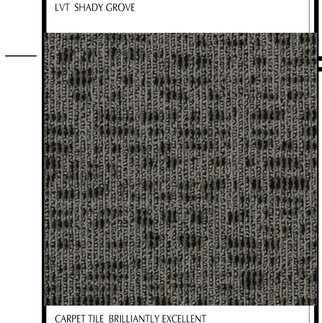
Silverpointe SW 7653
SW SW 7653 SILVERPOINTE

Homburg Gray SW 7622
SW 7622 HOMBURG GRAY

Mindful Gray SW 7016
SW 7016 MINDFUL GRAY



LVT SHADY GROVE



CARPET TILE BRILLIANTLY EXCELLENT

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P.O. BOX 100 OLATHE, KS 66051
MISSOURI STATE CERTIFICATE OF AUTHORITY # 2008034845
www.BuildWithRose.com

CRASH CHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE

PROJECT NUMBER 21009
DATE ISSUED: 10 / 04 / 21

SHEET NUMBER
A5.0

SCHEDULES

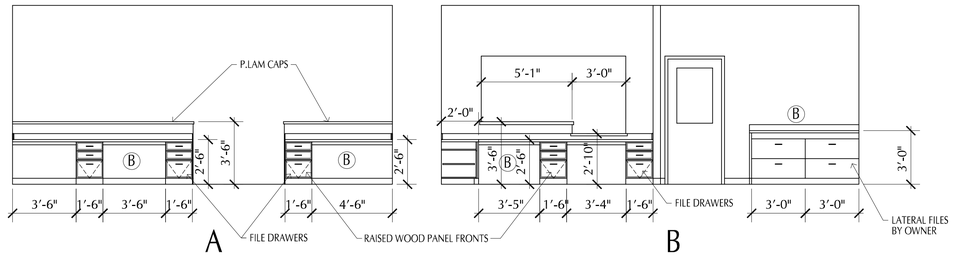
Oct 20, 2021 - 8:01am - USER ChrisB
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Oct 04, 2021 - 9:36am - USER ChrisB
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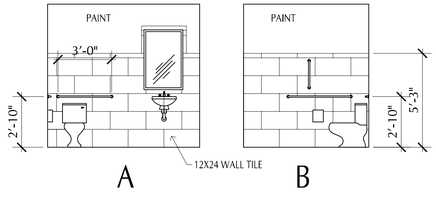
INTERIOR ELEVATIONS 7

TYP. SHOP #02 ELEVATION Scale 1/4" = 1'-0"



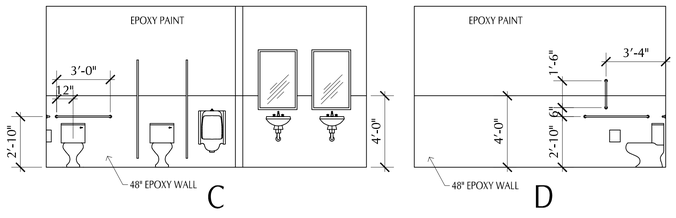
INTERIOR ELEVATIONS 6

SALES #12 Scale 1/4" = 1'-0"



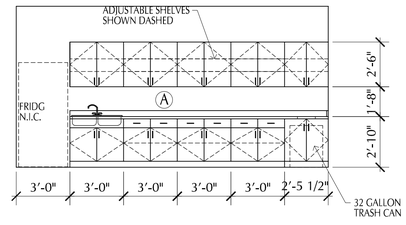
INTERIOR ELEVATIONS 5

MEN'S & WOMENS #07 & 08 Scale 1/4" = 1'-0"



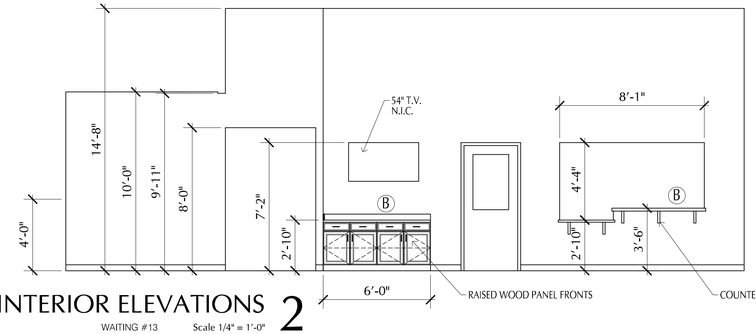
INTERIOR ELEVATIONS 4

SHOP RESTROOM #11 Scale 1/4" = 1'-0"



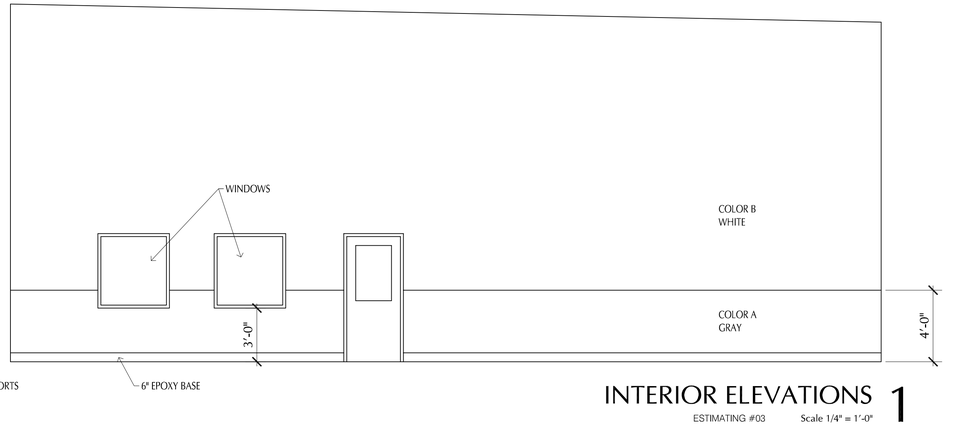
INTERIOR ELEVATIONS 3

BREAK ROOM #04 Scale 1/4" = 1'-0"



INTERIOR ELEVATIONS 2

WAITING #13 Scale 1/4" = 1'-0"



INTERIOR ELEVATIONS 1

ESTIMATING #03 Scale 1/4" = 1'-0"

PLAN NOTES

TOILET ACCESSORIES (BOBRICK) SPECS:
1. HAND DRYER, B-7128, SURFACE MOUNTED, 2 TOTAL
2. CHANNEL-FRAME MIRRORS
3. GRAB BARS: 1.5" DIA 18 GA TYPE 304 STAINLESS STEEL
4. TOILET PARTITIONS: COMPACT LAMINATE DURALINE SERIES 1080, FLOOR ANCHORED, W/ STANDARD CONCEALED STAINLESS STEEL HARDWARE

NOTES:
1. OWNER TO PROVIDE ALL SOAP & PAPER TOWEL DISPENSERS FOR RESTROOMS
2. PROVIDE WOOD BLOCKING IN WALLS FOR ALL RESTROOM GRAB BARS & ACCESSORIES
3. PROVIDE INSULATION WRAPS / COVERS FOR ALL EXPOSED LAVATORY WATER & DRAIN LINES

MILLWORK SPECIFICATIONS LISTINGS

(A) TOPS & BACKSPLASH: P.LAM, WILSONART PEARL SOAPSTONE WILSONART PEARL SOAPSTONE 4886
FRONTS: P.LAM, WILSONART NIGHT FALL 5023
INTERIOR: WHITE MELLAMINE
PULLS: HANDEL PULL, BRUSH SATIN NICHOL
HINGES: CONCEALED, STANDARD GRADE
GLIDES: STANDARD BALL BEARING

(B) TOPS & BACKSPLASH: FORMICA MINERAL JETT#3450-58MATTE
FRONTS: P.LAM, WOOD BIRCH, STAINED TO MATCH DOORS
INTERIOR: WHITE MELLAMINE
PULLS: HANDEL PULL, BRUSH SATIN NICHOL
HINGES: CONCEALED, STANDARD GRADE
GLIDES: STANDARD BALL BEARING

NOTES:
1. PROVIDE WOOD BACKING IN WALLS FOR ATTACHMENT OF ALL LOWER & UPPER CABINETS

DISCLAIMER
I, CHRISTOPHER R. BELL, AIA, REGISTERED ARCHITECT AND A REPRESENTATIVE OF ROSE DESIGN GROUP, INC., DO HEREBY ACCEPT PROFESSIONAL RESPONSIBILITY AS REQUIRED BY THE PROFESSIONAL REGISTRATION LAWS OF THIS STATE FOR THE ARCHITECTURAL DESIGN DRAWINGS CONSISTING OF SHEETS A-0 THRU A-1.5. I HEREBY DISCLAIM RESPONSIBILITY FOR ALL OTHER DRAWINGS IN THE CONSTRUCTION DOCUMENT PACKAGE, THEY BEING THE RESPONSIBILITY OF OTHER DESIGN PROFESSIONALS WHOSE SEALS AND SIGNED STATEMENTS MAY APPEAR ELSEWHERE IN THE CONSTRUCTION DOCUMENT PACKAGE.

Christopher R. Bell

STATE OF MISSOURI
CHRISTOPHER R. BELL
NUMBER A-6275
REGISTERED ARCHITECT

10/04/2021

CHRISTOPHER R. BELL - ARCHITECT
MO# A-6275

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INTERIOR ELEVATIONS

GENERAL NOTES - STRUCTURAL

1. The contractor shall verify dimensions and conditions before construction and notify the engineer of any discrepancies, inconsistencies, or difficulties affecting the work before proceeding.

2. The contractor shall coordinate all disciplines, verifying size and location of all openings, whether shown on structural drawings or not, as called for on architectural, mechanical, or electrical drawings. Conflicts, inconsistencies, or other difficulties affecting structural work shall be called to the architect or engineer's attention for direction before proceeding.

3. All design and construction work for this project shall conform to the requirements of the 2018 International Building Code, as amended by the City of Lee's Summit, Mo.

4. These drawings are for this specific project and no other use is authorized.

5. Structural Design Load Criteria:

   A. Roof Live= 20psf
   B. Snow = P_g = 20psf, P_f=14psf, I_s = 1.0
      Ce=1.0, Ct=1.0, Drift per ASCE/SEI 7-10
   C. Lateral Loads:
      1) Wind V = 115 mph, Exposure 'C'
         Occupancy [Risk] Category II, I=1.0
         GCpi=+/-0.18
         Design wind pressures to be used for the design of exterior component and cladding materials on the designated zones of wall and roof surfaces shall be per section 30.7 and Table 30.7-2 of ASCE/SEI 7-10. Tabulated pressures shall be multiplied by effective area reduction factors, exposure adjustment factors, and topographic factors where applicable.
      2) Seismic: S_{DS} = 0.112, S_1 = 0.065
         Occupancy [Risk] Category II, Ie = 1.0,
         Site Classification C; Sds = 0.09; Sd1 = 0.074
         Seismic Design Category A
         Basic Seismic Force-resisting System:
         Precast Concrete Shear Walls
   D. This project is designed to resist the most critical effects resulting from the load combinations of section 1605.3 of the 2018 International Building Code.

6. Concrete:

   A. All concrete for foundations (grade beams and footings) shall develop minimum ultimate compressive design strength of 3500 psi in 28 days, but not less than 500 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 6 gallons of water per 100 pounds of cement and not over 4 inches of slump.
   B. All concrete for interior flat work shall develop minimum ultimate compressive design strength of 4000 psi in 28 days, but not less than 525 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 5.75 gallons of water per 100 pounds of cement and not over 4 inches of slump. Concrete mix shop drawing shall contain testing data proving concrete design mix shrinkage is less than 0.034% at 28 days when tested according to ASTM C157 (air drying method only).
   C. All concrete for exterior flatwork shall have a minimum design compressive strength of 4500 psi in 28 days, with not less than 560 pounds of cement per cubic yard of concrete, not over 5 gallons of water per 100 pounds of cement, with 6% +/- 1% air entrainment, and a maximum of 4 inches of slump.
   D. The preceding minimum mix requirements may have water-reducing admixtures conforming to ASTM C494 added to the mix at manufacturer's dosage rates for improved workability.
   E. The preceding minimum mix requirements may have up to 15% maximum of the cement content replaced with an approved ASTM C618 Class C fly ash, provided the total minimum cementitious content is not reduced.
   F. Combined aggregate (coarse plus fine) for all concrete shall be well graded from coarsest to finest with no more than 18 percent and not less than 8 percent retained on an individual sieve, except that less than 8 percent may be retained on coarsest sieve and on No. 50 and finer sieves. Submit this gradation report with the concrete mix design shop drawings.
   G. All interior concrete slabs on grade shall be placed over 15 mil, Class A Vapor Barrier per ASTM E1745 with less than 0.01 perms, tested after mandatory conditioning. All joints shall be lapped and sealed per manufacturer's recommendations. All penetrations, as well as damaged vapor barrier material shall also be sealed per manufacturer's recommendation prior to concrete placement. Install barrier per manufacturer recommended details at all discontinuous edges (at interior columns, exterior edge of slab, etc.) to ensure terms of warranty are followed. The vapor barrier shall be placed over free-draining granular material as prescribed by the project soils report.
   H. All concrete is reinforced concrete unless specifically called out as unreinforced. Reinforce all concrete not otherwise shown with same steel as in similar sections or areas. Any details not shown shall be detailed per ACI 315 and meet requirements of ACI 318, current editions.
   I. Contractor shall verify that all concrete inserts, reinforcing and embedded items are correctly located and rigidly secured prior to concrete placement.
   J. No aluminum items shall be embedded in any concrete.

7. Reinforcing Steel:

   A. All reinforcing steel shall conform to the requirements of ASTM A615 or A706 grade 60 steel. Welded plain wire fabric shall be supplied in sheets and conform to the requirements of ASTM A1064.
   B. Clear coverage of concrete over reinforcing steel shall be as follows:
      Concrete placed against earth ——— 3"
      Formed concrete against earth ——— 2"
      Slabs ——— 1"
      Other ——— 2"
      All coverage shall be nominal bar diameter minimum.
   C. At corners of all grade beams supply corner bars (minimum 2'-6" in each direction or 48 bar diameters) in outside face of wall, matching size and spacing of horizontal bars.
   D. Bars marked continuous shall be lapped 48 bar diameters (2'-6" minimum) at splices, unless shown otherwise.
   E. Accessories shall be as specified in latest edition of the ACI Detailing Handbook and the concrete Reinforcing Steel Institute Design Handbook. Maximum accessory spacing shall be 4'-0" on center, and all accessories on exposed surfaces are to have plastic coated feet.
   F. All slabs not shown otherwise shall be 6" thick with #4 bars at 12" on center each way.

8. Structural Steel:

   A. All structural steel beams shall be ASTM A992, grade 50 steel and all miscellaneous steel shall be ASTM A36 grade steel. Hollow Structural Sections (HSS) shall be ASTM A500, grade B. Fabrication and erection shall be in accordance with AISC 303-05 "Code of Standard Practice for Steel Buildings and Bridges" in the 13th Edition of the AISC Steel Construction Manual.
   B. All welding shall conform to the recommendations of the AWS.
   C. All bolts not otherwise specified shall be 3/4" diameter high strength (ASTM A325-N). All bolts shall be fully pretensioned. All beam connections shall be designed per the AISC Steel Construction Manual "Framed Beam Connections" for the indicated reactions or at least 0.4 x beam total shear capacity, Vn/Omega, shown in the maximum total uniform load tables, whichever is greater; and, shall account for eccentricity when the bolt line is more than 2.4 from the center of the support. All connections must be two bolt minimum. The above loading information is given at the service-load level. Allowable Stress Design is to be used in the selection and completion of the connection design and details.
   D. All anchor bolts shall be 3/4" diameter, ASTM F1554, Grade 36 unless noted otherwise. Washers of minimum size and thickness for the given anchor diameter in Table 14-2 of the AISC Steel Construction Manual shall be provided at every column anchor bolt.

9. Post-Installed Anchors:

   A. Post-installed anchors shall be used only where specified on the drawings unless approved in writing by the engineer of record. See drawings for anchor diameter, spacing and embedment. Performance values of the anchors shall be obtained for specified products using appropriate design procedures and/or standards as required by the governing building code. Anchors installed in concrete shall have an ICC-ES Evaluation Service Report. Special inspection is required for all post-installed anchors. The general contractor shall coordinate an on-site meeting with the post-installed anchor manufacturer field representative and subcontractor performing the anchor installation to educate the construction team on the anchor installation guidelines and requirements. The contractor shall send a record copy of the meeting meetings to the design team.
   B. Mechanical anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ACI 355.2 and ICC-ES AC193. All anchors shall be installed per the anchor manufacturer's written instructions.
   C. Adhesive anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ICC-ES AC308. All anchors shall be installed per the anchor manufacturer's written instructions.
   D. Adhesive anchors used in solid grouted masonry shall have been tested and qualified for use in accordance with ICC-ES AC58. All anchors shall be installed per the anchor manufacturer's written instructions.
   E. Anchors used in hollow concrete masonry shall have been tested and qualified in accordance with ICC-ES AC106 or ICC-ES AC58 as appropriate. All anchors shall be installed per the anchor manufacturer's written instructions with appropriate screen tubes used for adhesives.

10. Foundations:

   A. Spread footings, grade beams, and retaining walls are designed to bear on engineered fill or undisturbed soil capable of safely sustaining 2000 psf.
   B. Contractor shall provide for dewatering at excavations from either surface water or seepage.
   C. All foundation excavations shall be inspected by a qualified soil engineer, approved by the architect and/or structural engineer, prior to placement of steel or concrete. This inspection shall be at the owner's expense.
   D. Moisture content in soils beneath building locations should not be allowed to change after footing excavations and after grading for slabs on grade are completed. If subgrade materials become desiccated or softened by water or other conditions, recompact materials to the density and water content specified for engineered fill. Do not place concrete on frozen ground.

11. Precast Concrete Members:

   A. The contractor/supplier is responsible for the design of all the precast members and connection between them and other structural members. Submit design calculations, sealed by an engineer licensed in the state of the project location, for review by the architect/engineer of record.
   B. All precast members are to be designed in accordance with ACI 318-14, 2018 IBC and other applicable codes, standards (see specs) and design criteria shown on design documents.
   C. Precast concrete members shall conform to the 2018 IBC for the required fire ratings (refer to architect's documents).
   D. All wall panels should be designed for building wind loads, seismic loads, gravity loads, and transmit these loads to the foundation through properly designed connections.
   E. Provide blockouts and openings for mechanical/electrical equipment. Refer to mechanical/electrical documents.
   F. Shop drawings shall be complete and shall include a layout plan, fabrication details, estimated camber, connection and anchorage details and member identification marks. Identification marks shall appear on manufactured units to facilitate correct field placement.

12. Shop Drawing Review:

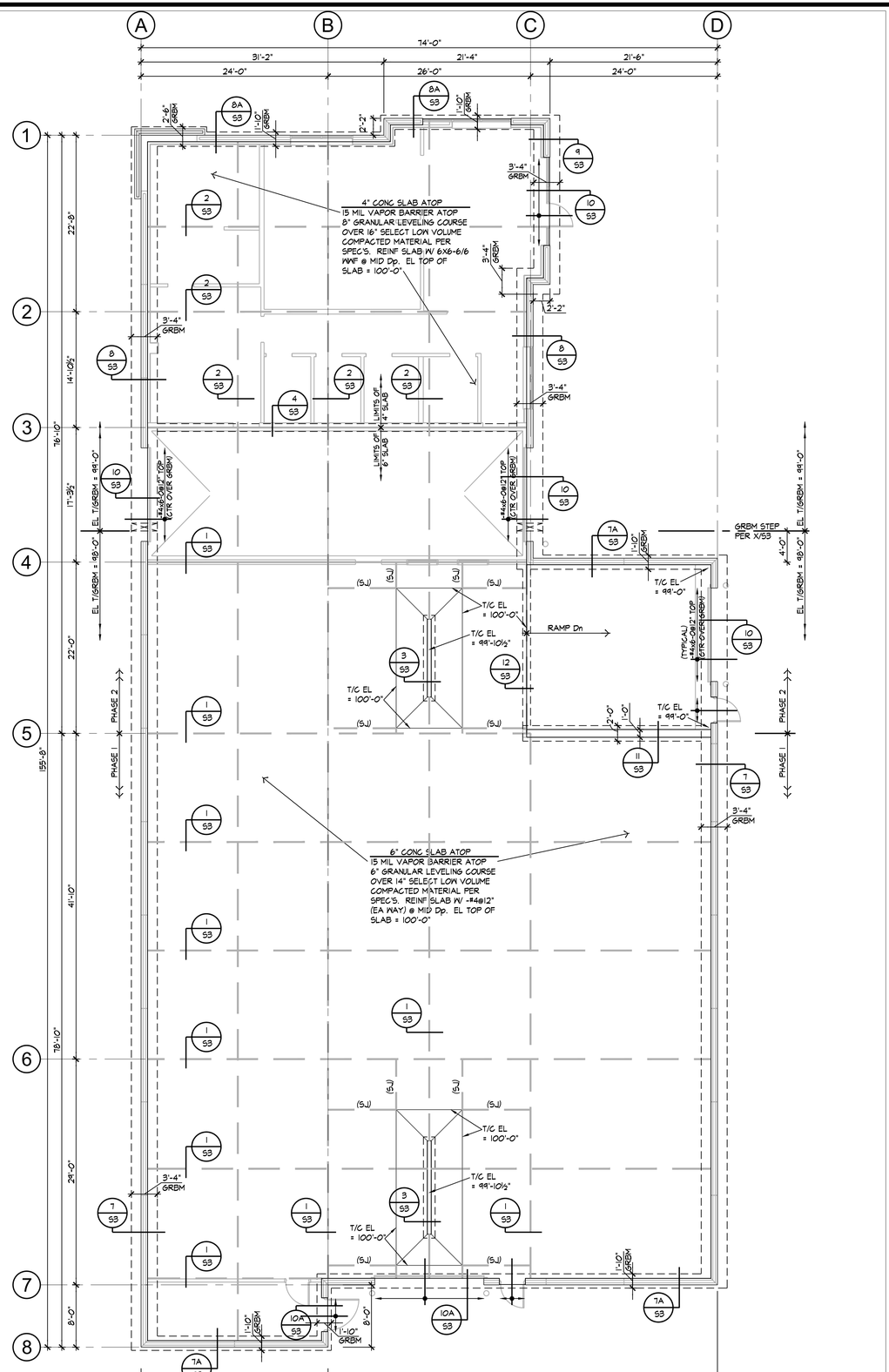
   A. Bob D. Campbell and Company, Inc. will review the General Contractor's (GC) shop drawings and related submittals (as indicated below) with respect to the ability of the detailed work, when complete, to be a properly functioning integral element of the overall structural system designed by Bob D. Campbell and Company, Inc.
   B. Prior to submittal of a shop drawing or any related material to Bob D. Campbell and Company, Inc., the GC shall:
      1) Review each submission for conformance with the means, methods, techniques, sequences and operations of construction and safety precautions and programs incidental thereto, all of which are the sole responsibility of the GC.
      2) Review and approve each submission.
      3) Stamp each submission as approved.
   C. Bob D. Campbell and Company, Inc. shall assume that no submission comprises a variation unless the GC advises Bob D. Campbell and Company, Inc. with written documentation.
   D. Shop drawings and related material (if any) required are indicated below. Should Bob D. Campbell and Company, Inc. require more than ten (10) working days to perform the review, Bob D. Campbell and Company, Inc. shall so notify the GC.
      1) Reinforcing steel shop drawings including erection drawings and bending details. Bar list will not be reviewed for correct quantities.
      2) Structural steel shop drawings including erection drawings and piece details. Include decking and connector submittals. Include miscellaneous framing specified on the structural drawings, but do not submit framing specified on non-structural drawings for Bob D. Campbell and Company, Inc. review.
      3) Precast concrete shop drawings including erection drawings and connection details.
      4) Precast concrete connection design calculations.
   E. Bob D. Campbell and Company, Inc. shall review shop drawings and related materials with comments provided that each submission has met the above requirements. Bob D. Campbell and Company, Inc. shall return without comment unrequired material or submissions without GC approval stamp.

13. Statement of Structural Special Inspection:

   A. The structural design for this project is based on completion of special inspections during construction in accordance with section 1704 of the 2018 International Building Code. The owner shall employ one or more qualified special inspectors to provide the required special inspections.
   B. The following inspections and tests are required with the frequency (continuous or periodic) as defined within the referenced section or standard listed below. The General Contractor shall provide notification to the inspector when items requiring inspection are ready to be inspected and provide access for those inspections.
      1) Shop Fabrication - structural steel per Section 1704.2.5 unless AISC certified shop
      2) Shop Fabrication - precast concrete per Section 1704.2.5 unless PCI certified shop
      3) Steel Construction per Section 1705.2 and the quality assurance requirements of AISC 341 Chapter J (as referenced by AISC 360)
      4) Concrete Construction per Section 1705.3 and Table 1705.3
         a. Reinforcing Steel Placement
         b. Cast in Place Anchors
         c. Post Installed Anchors
         d. Design Mix Verification
         e. Concrete Sampling and Testing
         f. Erection of Precast
      5) Verification of Soils per Table 1705.6
   C. The special inspector shall furnish inspection reports to the building official, owner, architect and structural engineer, and any other designated person.
   D. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design authority, building official and structural engineer.
   E. The special inspector shall submit a final signed report stating that the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions of the building code.

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   B. I, Michael J. Falbe, P.E., registered engineer and a representative of Bob D. Campbell and Company, Inc., do hereby accept professional responsibility as required by the professional registration laws of this state for the structural design drawings consisting of S-series drawings. I hereby disclaim responsibility for all other drawings in the construction document package, they being the responsibility of other design professionals whose seals and signed statements may appear elsewhere in the construction document package.



MISSOURI STATE OF MISSOURI
MICHAEL JOHN FALBE
NUMBER E-24014
REGISTERED PROFESSIONAL ENGINEER

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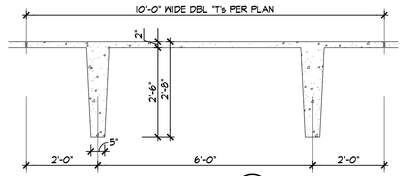
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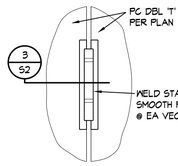
NO.	DESCRIPTION	DATE

PROJECT NUMBER 21009
DATE ISSUED: 09 / 29 / 21
SHEET NUMBER
S1

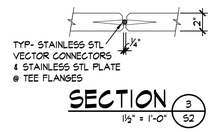
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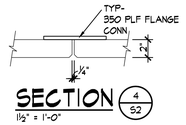
SECTION 1/52
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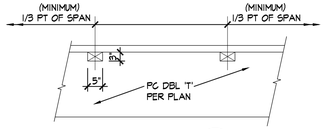
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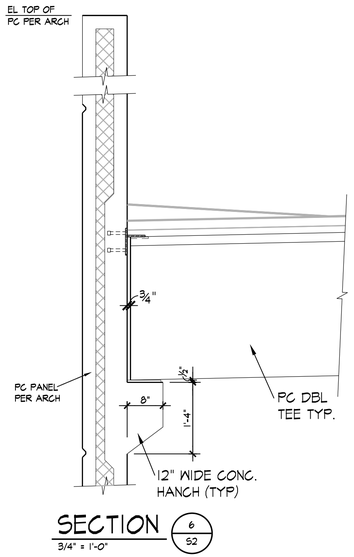
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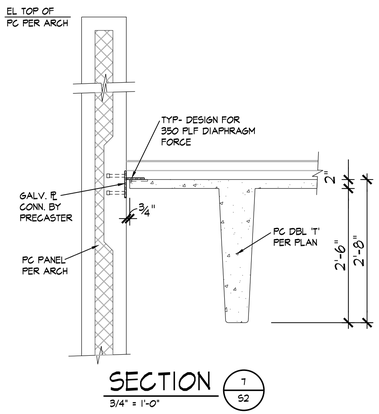
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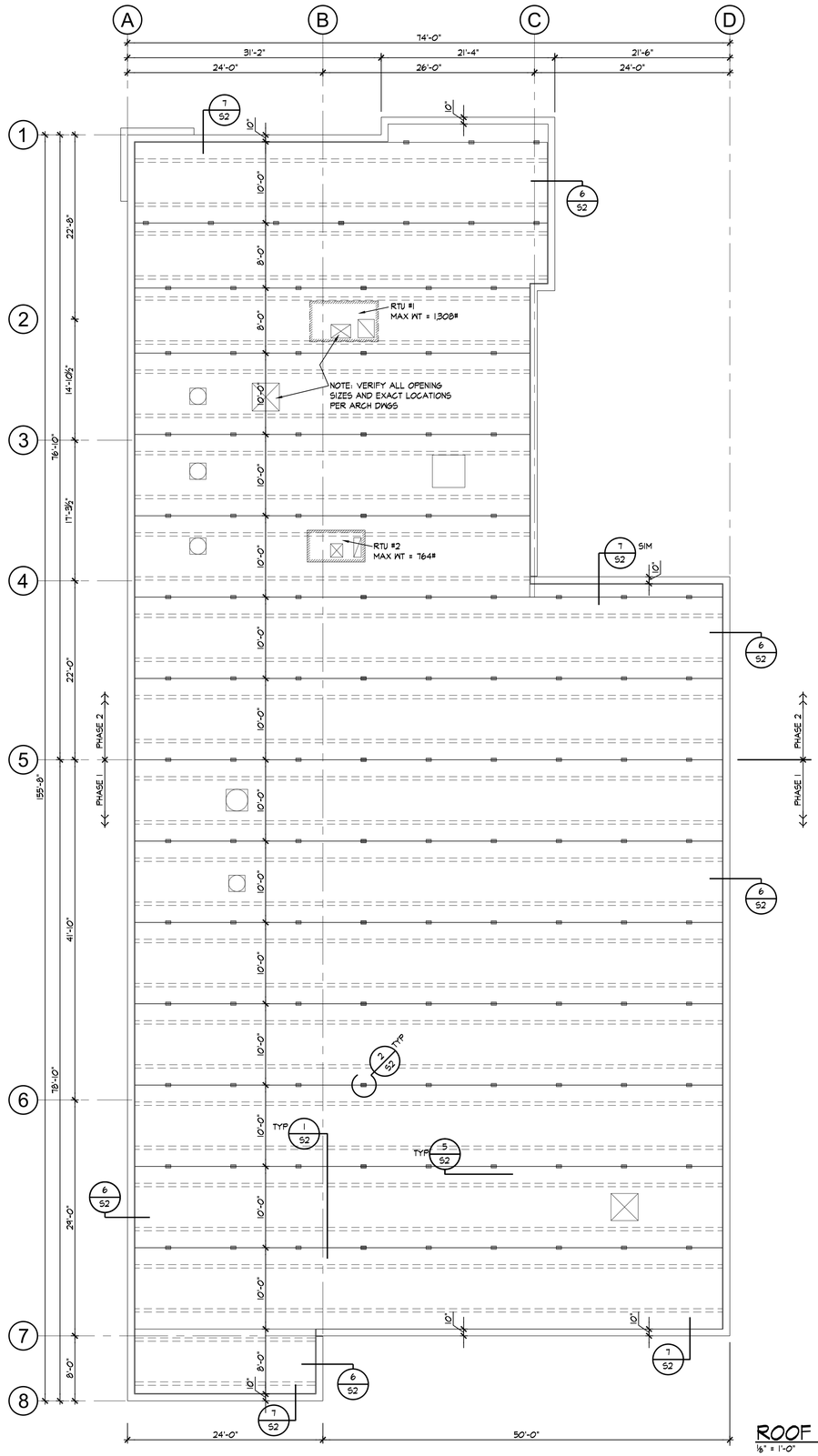
SECTION 5/52
1½" = 1'-0"



SECTION 6/52
3/4" = 1'-0"



SECTION 7/52
3/4" = 1'-0"



ROOF FRAMING PLAN
⅛" = 1'-0"
NORTH

NOTE:
1.) REFER TO GENERAL NOTES ON SHEET S-1

Dec. 06, 2021 – 1:19pm – USER jmf
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REGISTERED PROFESSIONAL ENGINEER

ROSE DESIGN GROUP INC

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A Division of Rose Design Build
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MISSOURI STATE CERTIFICATE OF AUTHORITY # 2008014845
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CRASH CHAMPIONS
COLLISION REPAIR TEAM

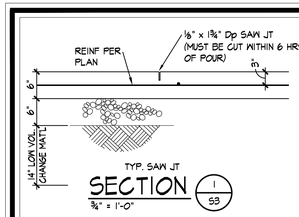
PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE

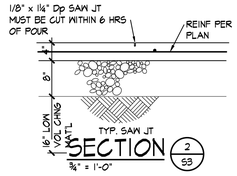
PROJECT NUMBER 21009
DATE ISSUED: 09 / 29 / 21

SHEET NUMBER

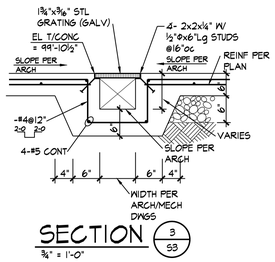
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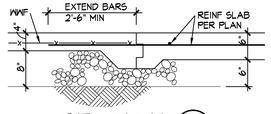
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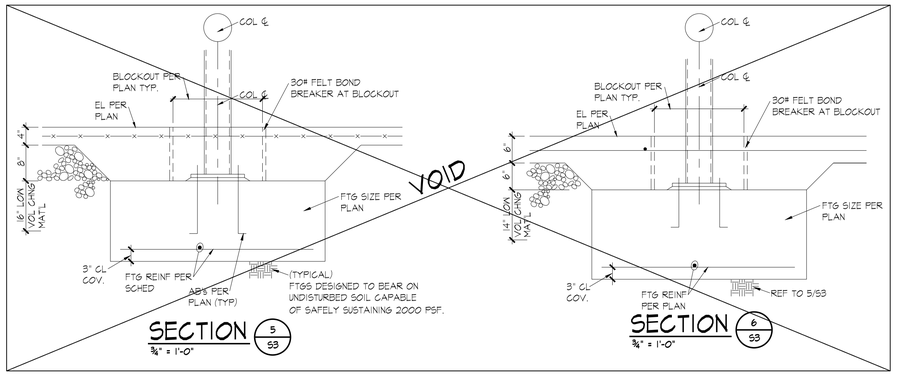
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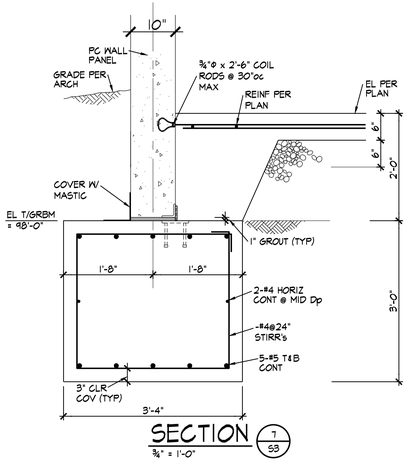


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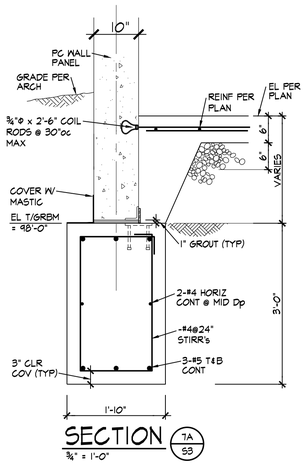


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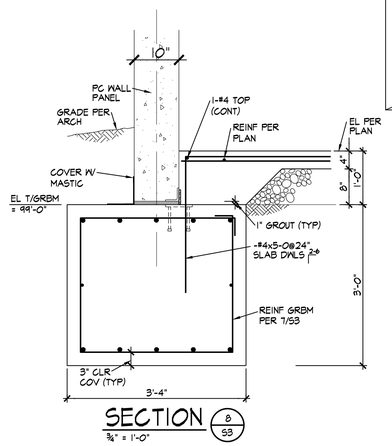
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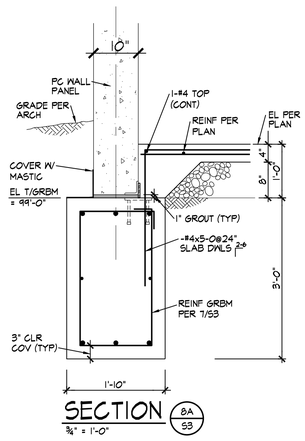
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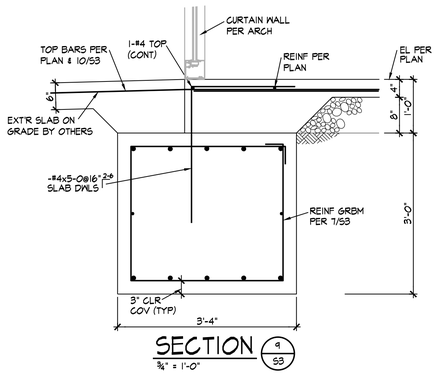
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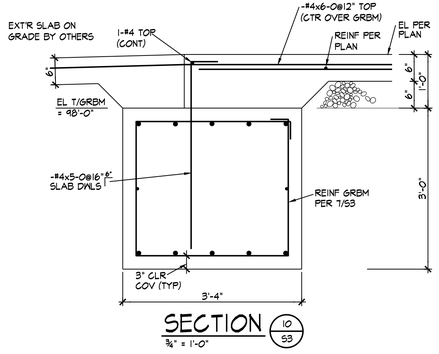
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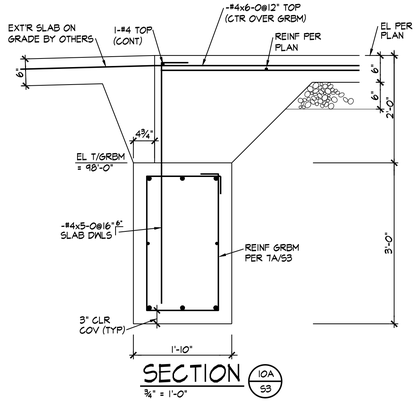
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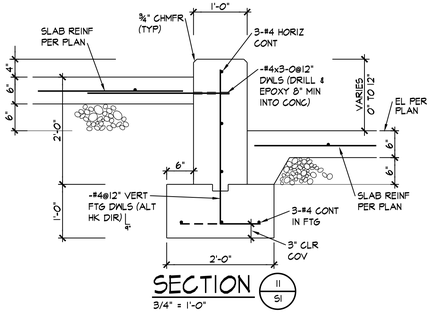
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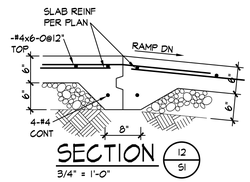
SECTION 10/S3 — ¾" = 1'-0"



SECTION 10A/S3 — ¾" = 1'-0"



SECTION 11/S1 — 3/4" = 1'-0"



SECTION 12/S1 — 3/4" = 1'-0"

Dec 06, 2021 — 1:19pm — USER jmf
T:\CAD\S\RCI\Projects\RCI2112 - Crash Champions – Lee's Summit\RCI2112 Dwgs\S-3R.dwg
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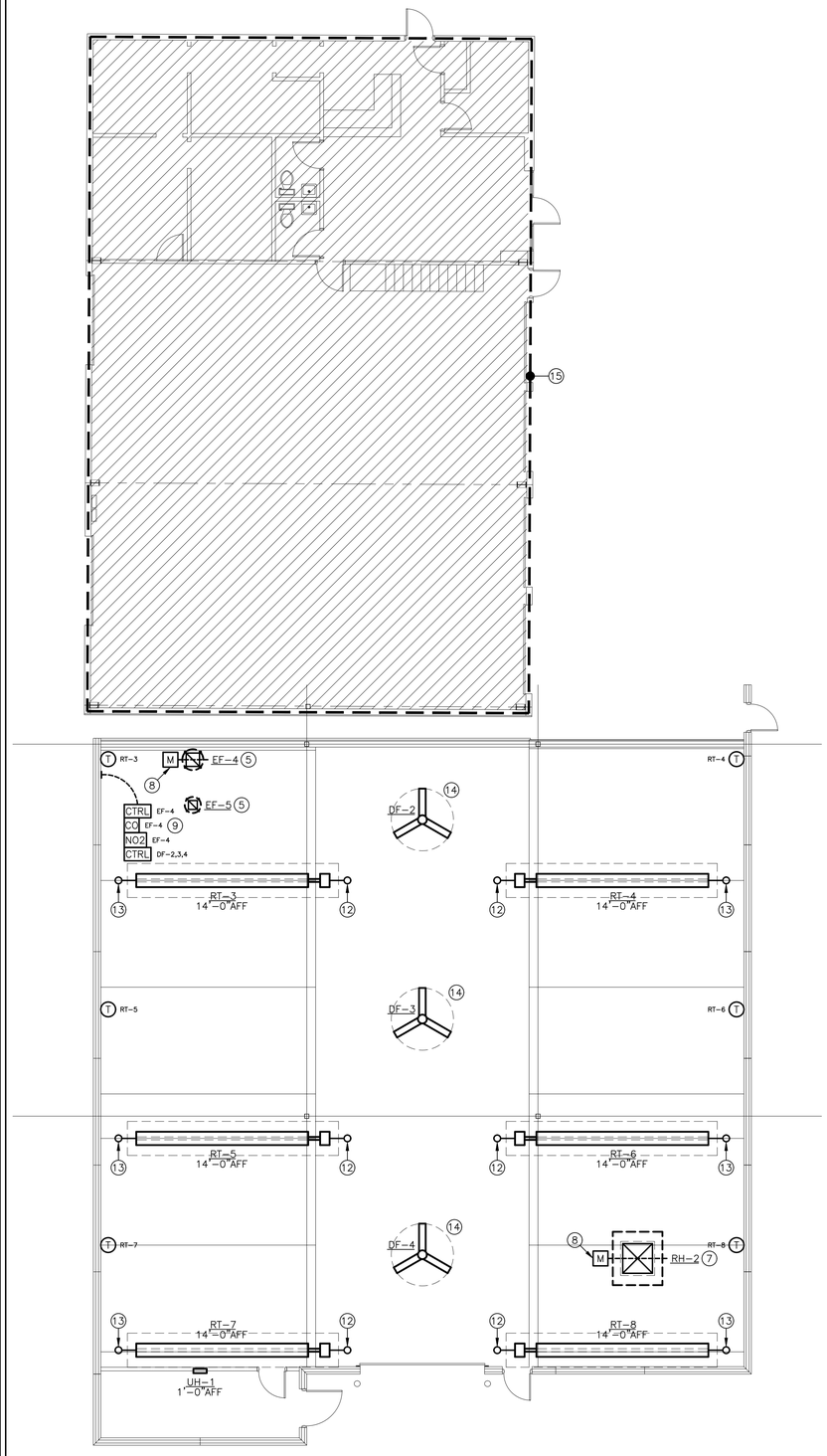
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PROJECT NUMBER 21009
DATE ISSUED: 09 / 29 / 21

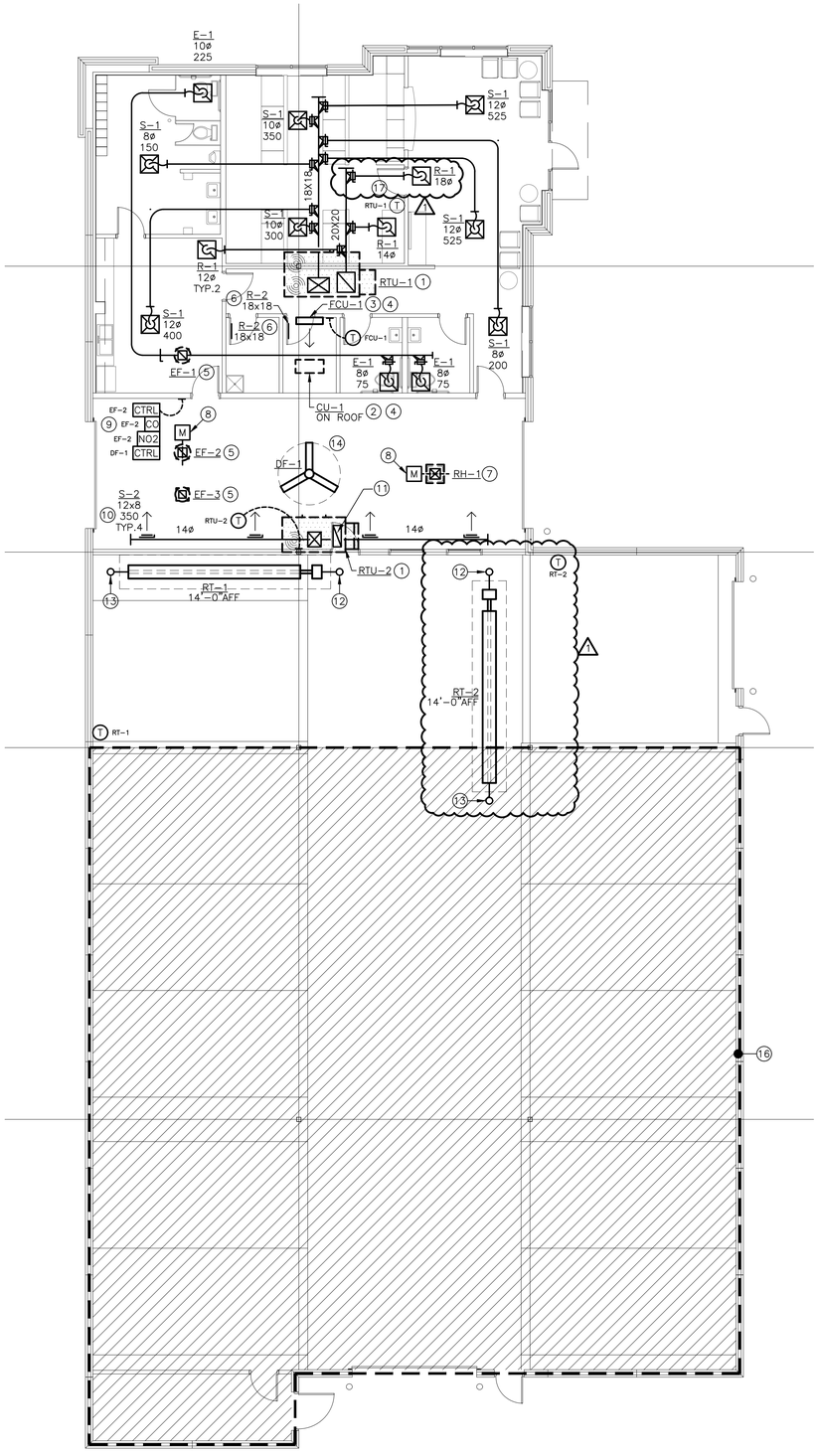
SHEET NUMBER

S3

Dec 06, 2021 – 2:08pm – USER Scott Groshans
C:\Users\Scott Groshans\Documents\Autodesk Docs\5BY5 ACTIVE PROJECTS\202100051 Crash Champions Lees Summit - Rose\Base-CAD\202100051_MECH.dwg
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1 PHASE I MECHANICAL PLAN
SCALE: 1/8" = 1'-0"



2 PHASE II MECHANICAL PLAN
SCALE: 1/8" = 1'-0"

MECHANICAL GENERAL NOTES:

- REFER TO M2.0 FOR MECHANICAL GENERAL NOTES.

MECHANICAL PLAN NOTES:

1. INSTALL ROOFTOP UNIT WHERE SHOWN ON PLAN. COORDINATE FINAL LOCATION WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS. FILL VOID CURB SPACE WITH MINIMUM THREE LAYERS EACH OF ALTERNATING 5/8" GYP BOARD AND ROLLED BATT INSULATION.
2. INSTALL MINI-SPLIT CONDENSING UNIT ON ROOF WHERE SHOWN ON PLAN. PROVIDE PRE-ENGINEERED ROOF SUPPORTS, THYCURB MODEL # TEMS-1 OR EQUAL.
3. INSTALL MINI-SPLIT INDOOR UNIT ON WALL WHERE SHOWN ON PLAN, AT MINIMUM 7'-6" ABOVE FINISHED FLOOR.
4. PROVIDE REFRIGERANT PIPING FROM FCU-1 TO CU-1 OF SIZES, MATERIAL, SLOPE, AND WITH VALVES AND SPECIALS PER MANUFACTURER'S REQUIREMENTS. INSULATE PIPING PER ENERGY CODE AND PROVIDE PROTECTIVE COATING ON INSULATION EXTERIOR TO THE BUILDING ENVELOPE.
5. INSTALL EXHAUST FAN ON ROOF WHERE SHOWN ON PLAN. MAINTAIN A MINIMUM 10'-0" CLEARANCE BETWEEN EXHAUST FAN DISCHARGE AND ALL HVAC OUTDOOR AIR INTAKES. COORDINATE ROOF PENETRATION WITH OTHER TRADES.
6. INSTALL GRILLE IN DOOR AT MINIMUM 0'-6" ABOVE FINISHED FLOOR.
7. INSTALL ROOF HOOD WHERE SHOWN ON PLAN. COORDINATE ROOF PENETRATION WITH OTHER TRADES.
8. PROVIDE MOTOR-OPERATED DAMPER IN DUCT RISER BELOW ROOF PENETRATION. MATCH DAMPER SIZE WITH HVAC EQUIPMENT CONNECTION SIZE. COORDINATE ACTUATOR VOLTAGE WITH GAS DETECTION SYSTEM REQUIREMENTS.
9. PROVIDE CARBON MONOXIDE / NITROGEN DIOXIDE DETECTION SYSTEM, MONOXIVENT MODEL # FDS-SA-CO-NO OR EQUAL, WITH CONTROLLER AND QUANTITY OR SENSORS AS RECOMMENDED BY THE MANUFACTURER. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
10. INSTALL SUPPLY GRILLE AT 45° ANGLE TOWARD FLOOR.
11. TERMINATE RETURN DUCT RISER AT MINIMUM 1'-0" BELOW ROOF PERMINATION, WITH 1/2'" ALUMINUM MESH SCREEN OVER RETURN AIR INLET.
12. PROVIDE 4ø COMBUSTION AIR INTAKE UP THROUGH ROOF. TERMINATE WITH KIT FURNISHED WITH TUBE HEATER. REFER TO TUBE HEATER MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR INTAKE MATERIAL REQUIREMENTS.
13. PROVIDE 4ø COMBUSTION AIR EXHAUST THROUGH ROOF. TERMINATE WITH KIT FURNISHED WITH TUBE HEATER. REFER TO TUBE HEATER MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR COMBUSTION EXHAUST MATERIAL REQUIREMENTS.
14. COORDINATE INSTALLATION OF HVLS FAN WITH OTHER TRADES. MAINTAIN OPERATIONAL AND MAINTENANCE CLEARANCES AS REQUIRED BY MANUFACTURER.
15. ALL EXISTING HVAC EQUIPMENT WITHIN INDICATED AREA SHALL REMAIN IN OPERATION FOR DURATION OF PHASE I.
16. ALL HVAC EQUIPMENT WITHIN INDICATED AREA TO BE PROVIDED IN PHASE I.
17. ROUTE INDICATED BRANCH DUCT BETWEEN CONCRETE T'S OF ROOF STRUCTURE AS REQUIRED TO ACCOMMODATE CEILING HEIGHT OF ROOM. COORDINATE WITH OTHER TRADES.

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CRASHCHAMPIONS COLLISION REPAIR TEAM

PROPOSED BUILDING FOR: CRASH CHAMPIONS

451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
	FOR PERMIT	10 / 22 / 21
1	CITY REVIEW COMMENTS	12 / 06 / 21

PROJECT NUMBER 21009
DATE ISSUED: 11 / 09 / 21

SHEET NUMBER
M1.0

MECHANICAL PLANS

LINETYPES LEGEND:

- NEW
- NEW – ON ROOF
- EXISTING
- EXISTING – ON ROOF
- DEMOLITION

DUCTWORK LEGEND:

- DUCT (SINGLE LINE)
- DUCT (DOUBLE LINE)
- ROUND O/A OR S/A DOWN
- ROUND O/A OR S/A UP
- ROUND E/A OR R/A DOWN
- ROUND E/A OR R/A UP
- RECTANGULAR O/A OR S/A DOWN
- RECTANGULAR O/A OR S/A UP
- RECTANGULAR E/A OR R/A DOWN
- RECTANGULAR E/A OR R/A UP
- O/A OR S/A DIFFUSER
- E/A OR R/A GRILLE
- AIR DEVICE WITH FLEX DUCT CONNECTION
- AIR DEVICE WITH HARD DUCT CONNECTION
- FLEXIBLE CONNECTION TO EQUIPMENT
- DUCT BREAK/CONTINUATION
- MANUAL BALANCING DAMPER
- (M) MOTOR–OPERATED DAMPER
- (BD) BACKDRAFT DAMPER
- (F) FIRE DAMPER
- (FS) FIRE/SMOKE DAMPER
- (S) SMOKE DAMPER
- (T) THERMOSTAT

ANNOTATION LEGEND:

- ABC–1 EQUIPMENT / FIXTURE TAG
- (–) PLAN NOTE
- CONNECT TO EXISTING
- AIR FLOW DIRECTION
- S–1 / 8ø / 300 G/R/D TAG, NECK SIZE, AIR FLOW (CFM)

ABBREVIATIONS LEGEND:

AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CAV	CONSTANT AIR VOLUME
CFM	CUBIC FEET PER MINUTE
CU	CONDENSING UNIT
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ESP	EXTERNAL STATIC PRESSURE
FCU	FAN COIL UNIT
FPM	FEET PER MINUTE
HC	HEATING CAPACITY
HP	HORSEPOWER
IN.WG	INCHES WATER GAUGE
LAT	LEAVING AIR TEMPERATURE
MAX	MAXIMUM
MBH	1,000 BTUH
MIN	MINIMUM
NC	NOISE CRITERIA
OA	OUTDOOR AIR
PSC	PUMPED STEAM CONDENSATE
QTY	QUANTITY
RA	RETURN AIR
REA	RELIEF AIR
REFR	REFRIGERANT
RG	RETURN GRILLE
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SC	SENSIBLE COOLING CAPACITY
SD	SUPPLY DIFFUSER
TC	TOTAL COOLING CAPACITY
TRA	TO ROOF ABOVE
TSP	TOTAL STATIC PRESSURE
VEL	VELOCITY

ROOFTOP UNIT SCHEDULE

TAG	AREA SERVED	MANUFACTURER	MODEL	SUPPLY FAN					OA MIN	COOLING COIL (DX)										HEATING COIL (NATURAL GAS)					ELECTRICAL				WEIGHT	NOTES
				FAN CONTROL	S/A FLOW (CFM)	MOTOR (HP)	ESP (IN.WG)	TSP (IN.WG)	FLOW (CFM)	NOM TONS	REFR TYPE	TC (MBH)	SC (MBH)	EAT (°F DB)	EAT (°F WB)	LAT (°F DB)	LAT (°F WB)	MIN EFF (EER)	MIN EFF (SEER)	STAGES (QTY)	NOM INPUT	HC (MBH)	EAT (°F DB)	LAT (°F DB)	MIN EFF (%)	STAGES (QTY)	V/PH	MCA	MOCP	(LBS)	
RTU-1	OFFICE	LENNOX	KGB092S	MSAV	2,400	2.0	0.75	1.20	600	7.5	R-410A	84.5	60.0	79.8	65.5	56.7	55.2	11.0	---	2	130	104.0	50.3	90.2	80	2	208/3	42	50	1,350	1-4,6-12
RTU-2	ESTIMATING	LENNOX	KGB048S	CAV	1,400	0.5	0.50	0.75	280	4	R-410A	46.7	33.2	78.6	64.8	56.8	55.3	11.5	14.0	1	108	86.0	53.6	110.2	80	2	208/3	20	30	800	1-3,5-12

NOTES:
1. PROVIDE WITH CONTROLLER AND CONTROL DEVICES BY MANUFACTURER. REFER TO SEQUENCES OF OPERATION.
2. PROVIDE WITH 7-DAY PROGRAMMABLE THERMOSTAT. COORDINATE DESIRED FEATURES WITH OWNER, PRIOR TO ORDER (E.G. WIFI CAPABILITY).
3. PROVIDE WITH FIXED DRY BULB TYPE ECONOMIZER ASSEMBLY.
4. PROVIDE WITH MANUFACTURER'S STANDARD POWER EXHAUST FAN.
5. PROVIDE WITH MANUFACTURER'S STANDARD BAROMETRIC RELIEF DAMPER AND HOOD.
6. PROVIDE WITH MANUFACTURER'S STANDARD INSULATED ROOF CURB WITH 1'-2" MINIMUM HEIGHT.
7. PROVIDE WITH NON-POWERED WEATHER-PROOF DUPLEX RECEPTACLE.
8. PROVIDE WITH 2" THICK, MINIMUM MERV-8 FILTERS.
9. PROVIDE WITH FACTORY-MOUNTED RETURN AIR SMOKE DETECTOR.
10. PROVIDE WITH CONDENSER COIL GUARDS.
11. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH.
12. UNIT SIZED FOR 100°F AMBIENT CONDENSING TEMPERATURE.

MINI-SPLIT HEAT PUMP SCHEDULE

TAGS		AREA SERVED	MANUFACTURER	MODEL NUMBERS		UNIT TYPE	REFR TYPE	FCU SUPPLY FAN			COOLING						HEATING			ELECTRICAL					NOTES
INDOOR UNIT	OUTDOOR UNIT			INDOOR UNIT	OUTDOOR UNIT			S/A FLOW (CFM)	O/A FLOW (CFM)	ESP (IN.WG)	NOM TONS	TC (MBH)	EAT (°F DB)	EAT (°F WB)	EFF (EER)	EFF (SEER)	HC (MBH)	EAT (°F DB)	EFF (HSPF)	FCU V/PH	FCU MCA	CU V/PH	CU MCA	CU MOCP	
FCU-1	CU-1	IT ROOM	LENNOX	MWMB024S4	MPB024S4S	SINGLE ZONE	R-410A	700	0	0	2.0	24.0	80.0	67.0	13.7	20.7	25.0	70.0	11.5	208/1	1.0	208/1	18	25	ALL

APPROVED EQUIVALENT MANUFACTURERS: CARRIER, DAIKIN, LENNOX, LG, MITSUBISHI.

NOTES:
1. PROVIDE WITH MANUFACTURER'S STANDARD MICROPROCESSOR CONTROLS.
2. FURNISH WITH WALL-MOUNT PROGRAMMABLE THERMOSTAT.
3. PROVIDE INDOOR UNIT WITH MANUFACTURER'S STANDARD CLEANABLE AIR FILTER.
4. PROVIDE WITH CONDENSER HAIL GUARDS.
5. PROVIDE WITH LOW AMBIENT KIT DOWN TO -10°F.

GRILLE, REGISTER, AND DIFFUSER SCHEDULE

TAG	SERVICE	MANUFACTURER	MODEL	CONSTRUCTION	MOUNTING (LOCATION)	MOUNTING (BORDER TYPE)	FACE SIZE (IN)	MAX NC	MAX APD (IN.WG)	NOTES
E-1	E/A	TITUS	PAR	STEEL	CEILING	LAY-IN	24 x 24	30	0.08	1,3,4
R-1	R/A	TITUS	PAR	STEEL	CEILING	LAY-IN	24 x 24	30	0.08	1,3,4
R-2	R/A	TITUS	T-700	STEEL	DOOR	SURFACE MT	NECK + 2-1/8"	30	0.08	1,3,4
S-1	S/A	TITUS	TMS	STEEL	CEILING	LAY-IN	24 x 24	30	0.10	1,2,3,4
S-2	S/A	TITUS	300RS	STEEL	WALL	SURFACE MT	NECK + 1-1/2"	30	0.10	1,3,4

NOTES:
1. NECK SIZE SHOWN ON PLANS.
2. PROVIDE WITH 4-WAY THROW, UNLESS INDICATED OTHERWISE ON PLANS.
3. PROVIDE WITH WHITE BAKED ENAMEL FINISH.
4. PROVIDE WITH FRAME TYPE TO MATCH CEILING / WALL CONSTRUCTION. COORDINATE WITH ARCHITECTURAL PLANS.

ROOF HOOD SCHEDULE

TAG	SERVICE	MANUFACTURER	MODEL	AIR FLOW (CFM)	THROAT (L" x W")	VEL (FPM)	APD (IN.WG)	NOTES
RH-1	EF-2 OA INTAKE	GREENHECK	FGI	650	14 x 14	478	0.05	ALL
RH-2	EF-4 OA INTAKE	GREENHECK	FGI	5,000	40 x 40	450	0.05	ALL

NOTES:
1. PROVIDE WITH 1/2" MESH ALUMINUM BIRDSCREEN.
2. PROVIDE WITH MANUFACTURER'S STANDARD INSULATED ROOF CURB, WITH MINIMUM 1'-2" HEIGHT. REFER TO ARCHITECTURAL PLANS FOR ROOF SLOPE.

UNIT HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	MOUNTING	OUTPUT (MBH)	INPUT (W)	V/PH	FLA	NOTES
UH-1	QMARK	CWH1201	WALL	6.1	1,800	120/1	15	1,2

NOTES:
1. PROVIDE WITH UNIT MOUNTED THERMOSTAT AND DISCONNECT SWITCH.
2. PROVIDE WITH MANUFACTURER'S STANDARD TRIM FOR WALL MOUNTING.

FAN SCHEDULE

TAG	AREA SERVED	MANUFACTURER	MODEL	MOUNTING	AIR FLOW (CFM) (DESIGN)	AIR FLOW (CFM) (TAB)	ESP (IN.WG)	TSP (IN.WG)	MOTOR (HP)	DRIVE TYPE	V/PH	NOTES
EF-1	OFFICE GENERAL EA	GREENHECK	G-095-VG	ROOF	475	375	0.50	0.66	1/6	DIRECT	120/1	1-6
EF-2	ESTIMATING CO/NO2 EA	GREENHECK	G-095-D	ROOF	650	650	0.15	0.25	1/8	DIRECT	120/1	1,2,5,7
EF-3	ESTIMATING MINIMUM EA	GREENHECK	G-060-D	ROOF	150	150	0.15	0.15	1/60	DIRECT	120/1	1-2,5,8
EF-4	SHOP CO/NO2 EA	GREENHECK	G-163-A	ROOF	5,000	5,000	0.15	0.25	2	DIRECT	120/1	1,2,5,7
EF-5	SHOP MINIMUM EA	GREENHECK	G-080-D	ROOF	350	350	0.15	0.15	1/20	DIRECT	120/1	1-2,5,8

NOTES:
1. PROVIDE MINIMUM 1'-2" TALL, INSULATED ROOF CURB WITH DAMPER TRAY. FIELD VERIFY EXISTING ROOF SLOPE.
2. PROVIDE WITH DISCONNECT SWITCH.
3. PROVIDE WITH BACKDRAFT DAMPER.
4. PROVIDE FAN WITH EC MOTOR, WITH POTENTIOMETER DIAL ON MOTOR FOR BALANCING PURPOSES.
5. PROVIDE WITH ALUMINUM BIRDSCREEN AT FAN DISCHARGE.
6. FAN TO OPERATE CONTINUOUSLY DURING OCCUPIED HOURS. COORDINATE WITH ELECTRICAL CONTRACTOR.
7. FAN TO OPERATE SUBJECT TO GAS DETECTION SYSTEM STATE. COORDINATE WITH ELECTRICAL CONTRACTOR.
8. FAN TO OPERATE AT ALL TIMES. COORDINATE WITH ELECTRICAL CONTRACTOR.

NATURAL GAS-FIRED RADIANT TUBE HEATER SCHEDULE

TAG	AREA SERVED	MANUFACTURER	MODEL	HEATER LENGTH	NOM INPUT (MBH) (MIN)	NOM INPUT (MBH) (MAX)	MIN EFF (%)	NG PRESS (IN.WG) (MIN)	NG PRESS (IN.WG) (MAX)	STAGES	V/PH	FLA	WEIGHT (LBS)	NOTES
RT-1	SHOP	DETROIT RADIANT	HL3-20-65	21'-9"	65	50	80	5.0	14.0	2	120/1	4.8	120	ALL
RT-2	SHOP	DETROIT RADIANT	HL3-20-65	21'-9"	65	50	80	5.0	14.0	2	120/1	4.8	120	ALL
RT-3	SHOP	DETROIT RADIANT	HL3-20-65	21'-9"	65	50	80	5.0	14.0	2	120/1	4.8	120	ALL
RT-4	SHOP	DETROIT RADIANT	HL3-20-65	21'-9"	65	50	80	5.0	14.0	2	120/1	4.8	120	ALL
RT-5	SHOP	DETROIT RADIANT	HL3-20-65	21'-9"	65	50	80	5.0	14.0	2	120/1	4.8	120	ALL
RT-6	SHOP	DETROIT RADIANT	HL3-20-65	21'-9"	65	50	80	5.0	14.0	2	120/1	4.8	120	ALL
RT-7	SHOP	DETROIT RADIANT	HL3-20-65	21'-9"	65	50	80	5.0	14.0	2	120/1	4.8	120	ALL
RT-8	SHOP	DETROIT RADIANT	HL3-20-65	21'-9"	65	50	80	5.0	14.0	2	120/1	4.8	120	ALL

NOTES:
1. PROVIDE WITH MANUFACTURER'S STANDARD WALL-MOUNTED THERMOSTAT
2. COORDINATE WITH ELECTRICAL CONTRACTOR FOR PROVIDE DISCONNECT SWITCH.
3. FURNISH INFRARED HEATER WITH COMBUSTION AIR INTAKE KIT AND ROOF VENT KIT.
4. FURNISH WITH SINGLE MOUNT BRACKETS AND CHAIN HANGING SETS.

DESTRATIFICATION FAN SCHEDULE

TAG	AREA SERVED	MANUFACTURER	MODEL	FAN DIAMETER	MOTOR POWER	DRIVE TYPE	V/PH	WEIGHT (LBS)	NOTES
DF-1	ESTIMATING	BIG ASS FANS	B3213-X3	7'-0"	63.8 W	DIRECT EC	120/1	25	ALL
DF-2	SHOP	BIG ASS FANS	B3213-X3	7'-0"	63.8 W	DIRECT EC	120/1	25	ALL
DF-3	SHOP	BIG ASS FANS	B3213-X3	7'-0"	63.8 W	DIRECT EC	120/1	25	ALL
DF-4	SHOP	BIG ASS FANS	B3213-X3	7'-0"	63.8 W	DIRECT EC	120/1	25	ALL

NOTES:
1. COORDINATE FINISH COLOR WITH ARCHITECT, PRIOR TO ORDER.
2. FURNISH WITH WALL CONTROLLER. REFER TO PLAN FOR MULTIPLE FANS TO BE CONTROLLED BY ONE CONTROLLER.

MECHANICAL GENERAL NOTES:

- DRAWINGS ARE SCHEMATIC IN NATURE AND BASED ON PRELIMINARY SITE OBSERVATION AND ORIGINAL DESIGN DRAWINGS (WHEN AVAILABLE). PRIOR TO BID, CONTRACTOR SHALL INVESTIGATE THE PROJECT SITE AND BECOME FULLY AWARE OF ALL FIELD CONDITIONS, CURRENT SYSTEM OPERATION, AS WELL AS COORDINATION REQUIREMENTS. COORDINATE ALL MECHANICAL WORK WITH ARCHITECTURAL DRAWINGS, EXISTING CONDITIONS, AND OTHER TRADES PRIOR TO BID OR START OF WORK.
- MECHANICAL WORK SHALL CONFORM TO APPLICABLE CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- COORDINATE HVAC EQUIPMENT POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
- PROVIDE ALL CONTROL WIRING AND FINAL CONTROL DEVICES (E.G. THERMOSTATS). COORDINATE LOW–VOLTAGE WIRING CONDUIT REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
- FABRICATE AND INSTALL DUCTWORK PER SMACNA RECOMMENDATIONS FOR THE PRESSURE CLASSIFICATIONS ENCOUNTERED.
  - LOW PRESSURE SUPPLY AIR: +2.0 IN.WG
  - RETURN AIR: –2.0 IN.WG
  - EXHAUST AIR (UPSTREAM OF FAN): –2.0 IN.WG
- PROVIDE MITERED ELBOWS AT CHANGES IN DIRECTION IN RECTANGULAR DUCTWORK. PROVIDE TURNING VANES IN ALL ELBOWS WHERE AIRFLOW CHANGES DIRECTION AT ANGLES 45° AND GREATER.
- COORDINATE HVAC EQUIPMENT CONDENSATE DRAIN REQUIREMENTS WITH PLUMBING CONTRACTOR.
- PROVIDE DUCT WRAP INSULATION FOR ALL SUPPLY AIR DUCTWORK. DUCT WRAP INSULATION SHALL BE 2" THICK, MINIMUM R–6.0 FIBERGLASS DUCT WRAP WITH VAPOR BARRIER.
- CONTRACTOR OPTION: PROVIDE INTERNAL LINER INSULATION FOR ALL RECTANGULAR SUPPLY AIR DUCTWORK. INTERNAL LINER INSULATION SHALL BE 1" THICK, 2 LB/FT^3 ACOUSTICAL DUCT LINER INSULATION WITH MINIMUM R–5.0.
- PROVIDE INTERNAL LINER INSULATION FOR RETURN AIR DUCTWORK WITHIN 10'–0" OF ROOF PENETRATION. INTERNAL LINER INSULATION SHALL BE 1" THICK, 2 LB/FT^3 ACOUSTICAL DUCT LINER INSULATION.
- DUCT DIMENSIONS SHOWN ON THE PLANS INDICATE THE FREE AREA DIMENSIONS. INCREASE SHEET METAL DIMENSIONS AS REQUIRED TO MEET FREE AREA DIMENSIONS WITH LINER INSTALLED.
- FLEXIBLE DUCTWORK SHALL HAVE 2" THICK, MINIMUM R–6.0 INSULATION. FLEXIBLE DUCTWORK SHALL NOT EXCEED 5'–0" IN LENGTH FOR SUPPLY AIR APPLICATIONS AND 3'–0" IN LENGTH FOR RETURN AIR AND EXHAUST AIR APPLICATIONS.
- COORDINATE ROOF PENETRATION REQUIREMENTS WITH ROOFING CONTRACTOR TO AVOID ROOF WARRANTY CONFLICTS.
- VERIFY AVAILABLE SPACE ABOVE ALL CEILINGS PRIOR TO FABRICATION OR INSTALLATION OF ANY DUCTWORK. COORDINATE DUCT INSTALLATION WITH OTHER TRADES.
- ALL DIMENSIONS SHOWN ON PLAN ARE IN INCHES, UNLESS EXPLICITLY LABELED OTHERWISE.
- PROVIDE A COMPLETE TEST AND BALANCE BY A NEBB CERTIFIED TEST AND BALANCE AGENCY.
- PROVIDE ACCESS PANELS AND ADEQUATE CLEARANCE FOR ACCESS OF ALL EQUIPMENT, VALVES, DAMPERS, AND DEVICES.

STATE OF MISSOURI
SCOTT D. GROSHANS
NUMBER PE-2019012798
PROFESSIONAL ENGINEER
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10/22/2021

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CRASHCHAMPIONS COLLISION REPAIR TEAM

PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
	FOR PERMIT	10 / 22 / 21

PROJECT NUMBER 21009
DATE ISSUED: 10 / 22 / 21

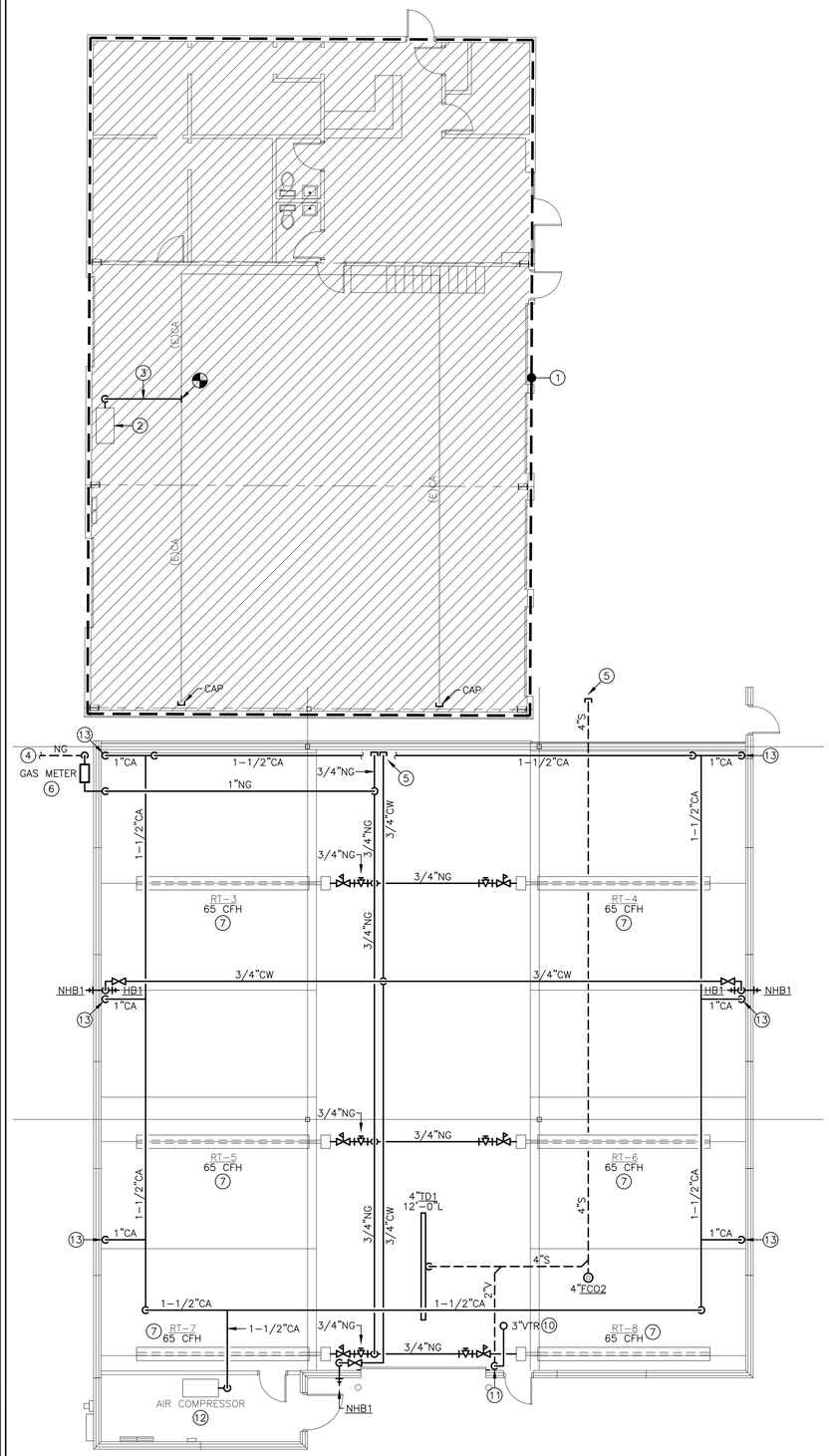
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MECHANICAL SCHEDULES

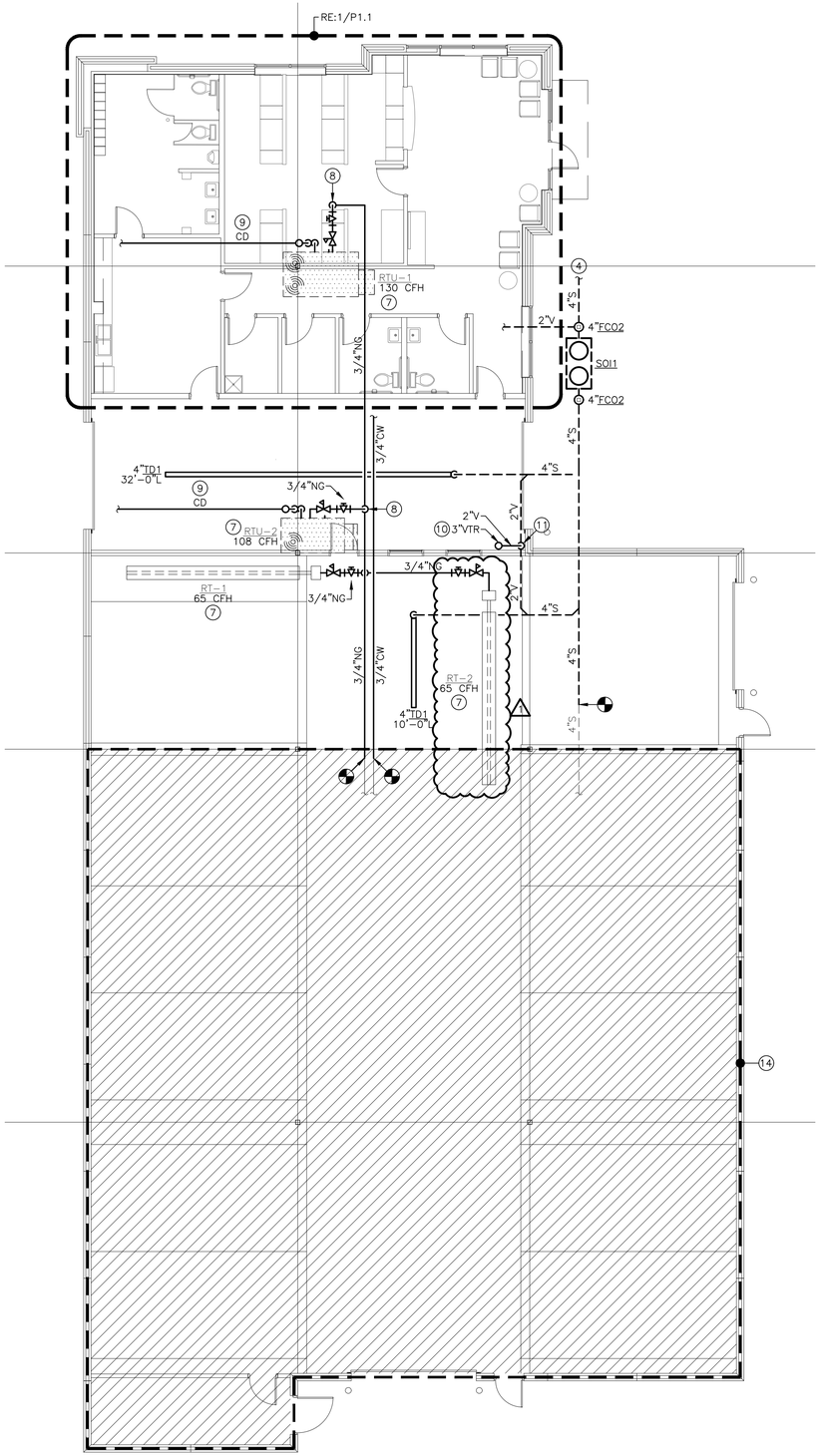
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1 PHASE I PLUMBING PLAN
SCALE: 1/8" = 1'-0"



2 PHASE II PLUMBING PLAN
SCALE: 1/8" = 1'-0"

PLUMBING GENERAL NOTES:

- REFER TO P2.0 FOR PLUMBING GENERAL NOTES.

PLUMBING PLAN NOTES:

1. EXISTING PLUMBING FIXTURES AND UTILITIES WITHIN INDICATED AREA TO REMAIN ACTIVE FOR DURATION OF PHASE I CONSTRUCTION.
2. TEMPORARILY RELOCATE EXISTING AIR COMPRESSOR TO LOCATION SHOWN ON PLAN FOR DURATION OF PHASE I CONSTRUCTION.
3. PROVIDE PIPING FROM TEMPORARY AIR COMPRESSOR LOCATION TO TIE INTO EXISTING COMPRESSED AIR MAIN OVERHEAD.
4. REFER TO CIVIL UTILITY PLAN FOR CONTINUATION OF PIPING OUTSIDE OF BUILDING FOOTPRINT.
5. PROVIDE TEMPORARY CAP. REFER TO PHASE II FOR CONTINUATION.
6. PROVIDE NEW NATURAL GAS SERVICE ENTRANCE AND METER WHERE SHOWN ON PLAN. REFER TO NATURAL GAS LOAD SCHEDULE FOR LOAD, TOTAL DEVELOPED LENGTH, AND SIZING DETAILS.
7. CONNECT NATURAL GAS TO MECHANICAL EQUIPMENT AS SHOWN. PROVIDE DIRT LEG, GAS COCK, AND REGULATOR. REFER TO MECHANICAL EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS. COORDINATE WITH MECHANICAL CONTRACTOR.
8. ROUTE NATURAL GAS PIPING UP THROUGH ROOF TO CONNECT TO RTU. COORDINATE ROOF PENETRATION WITH OTHER TRADES.
9. PROVIDE CONDENSATE DRAIN WITH P-TRAP, FULL SIZE OF CONNECTION AT ROOFTOP UNIT. ROUTE PIPING ACROSS ROOF DISCHARGE INTO ROOF GUTTER WITH AIR GAP.
10. ROUTE 3" VENT UP THROUGH ROOF (VTR). DISCHARGE AT MINIMUM 1'-6" ABOVE FINISHED ROOF. INSTALL AT MINIMUM OF 10'-0" FROM ALL MECHANICAL OUTDOOR AIR INTAKES
11. PROVIDE CAST IRON VENT RISER FROM FLOOR PENETRATION TO MINIMUM 8'-0" ABOVE FINISHED FLOOR.
12. AIR COMPRESSOR PROVIDED BY OTHERS. PROVIDE COMPRESSED AIR PIPING CONNECTION WITH VALVES AND SPECIALS PER AIR COMPRESSOR MANUFACTURER'S RECOMMENDATIONS.
13. PROVIDE 1"CA DROP DOWN WALL. TERMINATE WITH SHUTOFF VALVE. COORDINATE CONNECTION TO OWNER EQUIPMENT WITH OTHER TRADES.
14. ALL PLUMBING FIXTURES AND PIPING WITHIN INDICATED AREA TO BE PROVIDED IN PHASE I.

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CRASHCHAMPIONS COLLISION REPAIR TEAM

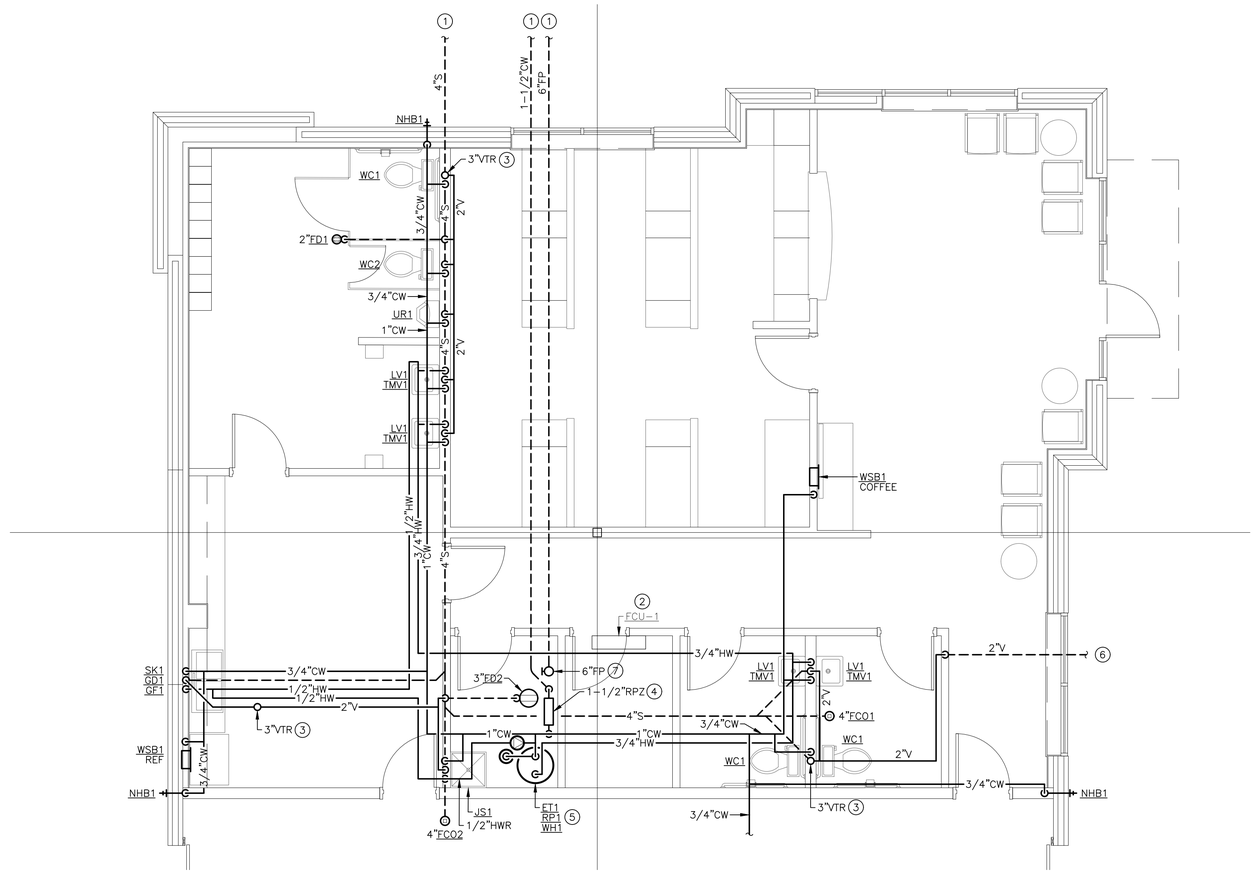
PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
	FOR PERMIT	10 / 22 / 21
1	CITY REVIEW COMMENTS	11 / 09 / 21

PROJECT NUMBER 21009
DATE ISSUED: 11 / 09 / 21

SHEET NUMBER
P1.0

PLUMBING PLANS



1 PHASE II PLUMBING ENLARGED PLAN
SCALE: 1/4" = 1'-0"

PLUMBING GENERAL NOTES:

- REFER TO P2.0 FOR PLUMBING GENERAL NOTES.

(-) PLUMBING PLAN NOTES:

1. REFER TO CIVIL UTILITY PLAN FOR CONTINUATION OF PIPING OUTSIDE OF BUILDING FOOTPRINT.
2. PROVIDE 3/4" CONDENSATE DRAIN FROM FCU-1 CONDENSATE PUMP DISCHARGE TO FLOOR DRAIN IN ADJACENT WATER ENTRANCE ROOM. TERMINATE INTO FLOOR DRAIN WITH AIR GAP. ROUTE PIPING CONCEALED ABOVE CEILING AND IN WALL CAVITY AS MUCH AS POSSIBLE. PROVIDE ESCUTCHEONS AT WALL AND CEILING PENETRATIONS.
3. ROUTE 3" VENT UP THROUGH ROOF (VTR). DISCHARGE AT MINIMUM 1'-6" ABOVE FINISHED ROOF. INSTALL AT MINIMUM OF 10'-0" FROM ALL MECHANICAL OUTDOOR AIR INTAKES
4. NEW 1-1/2" DOMESTIC WATER SERVICE ENTRANCE. REFER TO DETAIL 1/P2.0 FOR MORE INFORMATION.
5. INSTALL WATER HEATER IN MECHANICAL ROOM WHERE SHOWN ON PLAN. CONNECT WATER PIPING, VALVES, RECIRCULATION PUMP, AND EXPANSION TANK TO WATER HEATER SYSTEM PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND DETAIL 2/P2.0.
6. 2"V BELOW GRADE FROM SAND/OIL INTERCEPTOR CLEANOUT. REFER TO 2/P1.0 FOR CONTINUATION.
7. 6"FP ENTRANCE. PROVIDE BUTTERFLY SHUTOFF VALVE AT 2'-0" ABOVE FINISHED FLOOR WITH BLIND FLANGE. FIRE PROTECTION DOWNSTREAM OF ENTRANCE TO BE DESIGNED AND INSTALLED BY FIRE PROTECTION CONTRACTOR.

STATE OF MISSOURI
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CRASHCHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BUILDING FOR:
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451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
	FOR PERMIT	10 / 22 / 21

PROJECT NUMBER 21009
DATE ISSUED: 10 / 22 / 21

SHEET NUMBER
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PLUMBING ENLARGED PLAN

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LINETYPES LEGEND:

- NEW – ABOVE SLAB
- NEW – BELOW SLAB
- EXISTING – ABOVE SLAB
- EXISTING – BELOW SLAB
- DEMOLITION

PIPING LEGEND:

- ELBOW DOWN
- ELBOW UP
- P–TRAP
- TEE DOWN
- ELBOW UP
- SHUT–OFF VALVE (GENERIC)
- BALL VALVE
- GLOBE VALVE
- BUTTERFLY VALVE
- GATE VALVE
- CHECK VALVE
- BALANCING VALVE
- PRESSURE REDUCING VALVE
- GAS COCK
- WYE–STRAINER
- UNION
- FLANGE
- RELIEF VALVE
- AIR VENT (MANUAL / AUTOMATIC)
- FLOW DIRECTION
- PIPE BREAK / CONTINUATION
- FLOOR DRAIN
- FLOOR SINK
- FLOOR CLEANOUT
- HOSE BIBB

ANNOTATION LEGEND:

- ABC–1 EQUIPMENT / FIXTURE TAG
- PLAN NOTE
- CONNECT TO EXISTING

ABBREVIATIONS LEGEND:

AFF	ABOVE FINISHED FLOOR
BOP	BOTTOM OF PIPE
CFH	CUBIC FEET PER HOUR
CA	COMPRESSED AIR
CO	CLEANOUT
CW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
ET	EXPANSION TANK
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HP	HORSEPOWER
HWR	HOT WATER RECIRCULATION
IE	INVERT ELEVATION
IN.WG	INCHES WATER GAUGE
JS	JANITOR SINK
LV	LAVATORY
MAX	MAXIMUM
MB	MOP BASIN
MBH	1,000 BTUH
MIN	MINIMUM
NG	NATURAL GAS
NHB	NON–FREEZE HOSE BIBB
QTY	QUANTITY
RP	RECIRCULATION PUMP
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
S	SANITARY WASTE
SK	SINK
TD	TRENCH DRAIN
TMV	THERMOSTATIC MIXING VALVE
TRA	TO ROOF ABOVE
UR	URINAL
V	VENT
WC	WATER CLOSET
WH	WATER HEATER
WCO	WALL CLEANOUT

FIXTURE CONNECTION SCHEDULE

FIXTURE	WASTE	VENT	COLD	HOT	NOTES
COFFEE/TEA MACHINES	SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS				DCVB
FLOOR DRAIN / TRENCH DRAIN	SEE PLAN	2"	---	---	---
HOSE BIBBS	---	---	1/2"	---	VB
JANITOR'S SINK	2"	1-1/2"	1/2"	1/2"	VB
LAVATORY - PUBLIC	2"	1-1/2"	1/2"	1/2"	TMV
SINK - BREAKROOM	2"	1-1/2"	1/2"	1/2"	---
URINAL	2"	2"	1"	---	---
WATER CLOSET (TANK TYPE)	4"	2"	1/2"	---	---

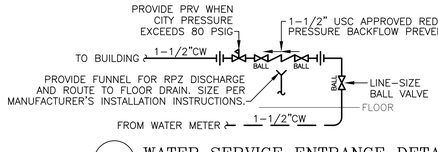
NOTES:
DCVB: DOUBLE CHECK VALVE ASSEMBLY, LINE SIZED, CONFORMING TO ASSE 1022.
TMV: POINT OF USE TYPE THERMOSTATIC MIXING VALVE CONFORMING TO ASSE 1070.
VB: ATMOSPHERIC TYPE VACUUM BREAKER CONFORMING TO ASSE 1020.

INSTALL BACKFLOW PREVENTION DEVICES ON EQUIPMENT AND FIXTURES PER LOCAL WATER COMPANY REQUIREMENTS. ALL BACKFLOW PREVENTERS SHALL BE IN AN ACCESSIBLE LOCATION FOR PERIODIC INSPECTION AND TESTING.

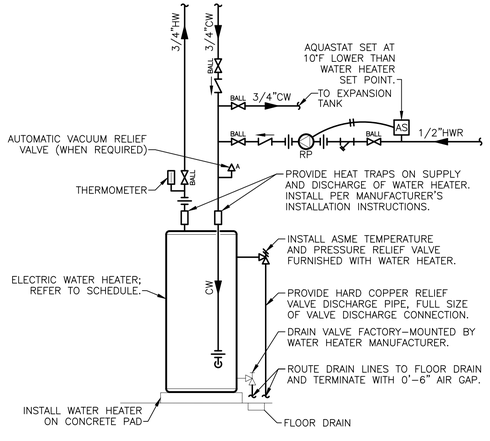
NATURAL GAS LOAD SCHEDULE

EQUIPMENT TAG	QTY	DESCRIPTION	CFH INPUT (EACH)	TOTAL CFH
RT-1	1	RADIANT TUBE HEATER	65	65
RT-2	1	RADIANT TUBE HEATER	65	65
RT-3	1	RADIANT TUBE HEATER	65	65
RT-4	1	RADIANT TUBE HEATER	65	65
RT-5	1	RADIANT TUBE HEATER	65	65
RT-6	1	RADIANT TUBE HEATER	65	65
RT-7	1	RADIANT TUBE HEATER	65	65
RT-8	1	RADIANT TUBE HEATER	65	65
RTU-1	1	ROOFTOP UNIT	130	130
RTU-2	1	ROOFTOP UNIT	108	108
			SYSTEM TOTAL =	758

NOTES:
1. METER DISCHARGE PRESSURE: 2.0 PSIG
2. TOTAL DEVELOPED LENGTH: 250 FT
3. DESIGN NATURAL GAS PIPING SYSTEM PRESSURE DROP: 1 PSIG
4. INLET PRESSURE FOR ALL GAS-FIRED EQUIPMENT: 7 TO 11 IN.WG.



1 WATER SERVICE ENTRANCE DETAIL
SCALE: NTS



NOTES:

- INSTALL PER MANUFACTURER'S REQUIREMENTS.

2 WATER HEATER DETAIL
SCALE: NTS

PLUMBING FIXTURE SCHEDULE:

INFORMATION BELOW IS FOR GENERAL FIXTURE REQUIREMENTS ONLY. PLUMBING CONTRACTOR SHALL COORDINATE WITH OWNER AND ARCHITECT FOR EXACT FIXTURE REQUIRED FOR THE PROJECT. COORDINATE WITH OWNER FOR INFORMATION ON PROCURING FIXTURES AND ASSOCIATED COSTS. CONTRACTOR SHALL BE CLEAR AS TO WHAT FIXTURES ARE INCLUDED IN THEIR PROPOSED COSTS.

FIXTURES IN THIS SCHEDULE, OR THE APPROVED EQUIVALENT, SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER REQUIREMENTS.

ET1
- EXPANSION TANK: 150 PSIG MAXIMUM WORKING PRESSURE, 4.5–GALLON CAPACITY, 0.45 MAXIMUM ACCEPTANCE FACTOR, AND 3/4" PIPE CONNECTION. SET THE AIR CHARGE PRESSURE TO MATCH EXISTING WATER SYSTEM PRESSURE.

FCO1
- FLOOR CLEANOUT: CAST IRON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE, ROUND, SECURED, HEAVY–DUTY SCORIATED NICKEL BRONZE TOP. INSTALL PER MANUFACTURER'S REQUIREMENTS BASED ON FLOORING TYPE USED. PROVIDE ACCESSORIES AS REQUIRED FOR PROPER INSTALLATION. COORDINATE FINISH TYPE WITH ARCHITECTURAL PLANS.

FCO2
- HEAVY–DUTY FLOOR CLEANOUT: CAST IRON BODY; FLASHING FLANGE WITH CLAMPING COLLAR; ABS PLUG; AND ADJUSTABLE, ROUND, SECURED, HEAVY–DUTY SCORIATED NICKEL BRONZE TOP.

FD1
- PVC FLOOR DRAIN: FLOOR DRAIN WITH ADJUSTABLE 6" ROUND MEDIUM–DUTY CAST NICKEL STRAINER, WITH FLANGED PVC ADAPTER. CLEAN AND POLISH STRAINER AFTER INSTALLATION, PROVIDE A DEEP SEAL TRAP, FLANGED PVC ADAPTER, AND TRAP GUARD.

FD2
- PVC EQUIPMENT FLOOR DRAIN: 5" DEEP ROUND PVC BODY, WITH PVC SOCKET OUTLET, ANCHOR FLANGE, ROUND PVC DEBRIS BUCKET, 9" ROUND CAST IRON GRATE AND FRAME.

GD1
- GARBAGE DISPOSER: LIGHT COMMERCIAL DISPOSER WITH 1/2 HP AUTOMATIC REVERSING MOTOR WITH POWER CORD, STAINLESS STEEL GRIND CHAMBER, AND CAST NICKEL CHROME CUTTING ELEMENT.
- ELECTRICAL REQUIREMENTS: 120V/1ø, 5.8 FULL LOAD AMPS.
- TRIM: WASTE DISCHARGE KIT.

GF1
- GLASS FILLER: STAINLESS STEEL GOOSENECK GLASS FILLER WITH PLASTIC PUSH LEVER CONTROL. MOUNT TO DECK OF SINK INDICATED ON PLAN. COORDINATE WATER FILTRATION REQUIREMENTS WITH OWNER, PRIOR TO ORDER.

HB1
- HOSE BIBB: ROUGH CHROME–PLATED BRASS, 3/4" FEMALE INLET, 3/4" THREADED HOSE CONNECTION, QUARTER–TURN WHEEL HANDLE, AND INTEGRAL VACUUM BREAKER.

JS1
- JANITOR'S SINK: 24"W x 24"L x 10"H MOLDED FIBER BASIN WITH INTEGRAL STAINLESS STEEL DRAIN BODY.
- FAUCET: FAUCET WITH WALL BRACE, INTEGRAL VACUUM BREAKER, PAIL HOOK, AND 3/4" MALE HOSE THREADED OUTLET. SECURE FAUCET IN WALL WITH BACKBOARD.
- TRIM: TYPE 304 20–GAUGE STAINLESS STEEL WALL SURROUNDS, 3'–0" LONG REINFORCED HOSE WITH 3/4" CHROME COUPLING AND WALL HOOK, EXTRUDED VINYL BUMPER GUARD, AND 2'–0" STAINLESS STEEL MOP HANGER.

LV1
- WALL–MOUNTED LAVATORY (ADA ACCESSIBLE): RECTANGULAR WALL–MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW.
- FAUCET: 4" CENTERSET, VANDAL–RESISTANT FAUCET WITH LEVER HANDLES AND 0.5 GPM AERATOR.
- TRIM: GRID DRAIN WITH TAILPIECE, QUARTER–TURN BALL TYPE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, 1–1/4" 17–GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P–TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, AND INSULATION KIT FOR WATER AND WASTE PIPES.

RP1
- RECIRCULATION PUMP: WET ROTOR TYPE INLINE PUMP WITH 2,800 RPM MOTOR, LEAD–FREE BRONZE BODY WITH UNION CONNECTIONS, CAPACITY OF 2.0 GPM AT 7.0 FT.WG HEAD. PROVIDE WITH SURFACE–MOUNTED AQUASTAT WITH SINGLE POLE DOUBLE THROW SWITCH FOR CIRCULATOR CONTROL AND ADJUSTABLE DIFFERENTIAL SET TO 10°F. SET AQUASTAT TO SHUT OFF RECIRCULATION PUMP AT WATER HEATER SET POINT AND ON AT 10°F BELOW SET POINT. POWER WITH 120 VOLT CIRCUIT.

SK1
- DOUBLE COMPARTMENT SINK: SIZE TO BE SELECTED BY ARCHITECT, DOUBLE COMPARTMENT, SELF–RIMMING, 18–GAUGE TYPE 302 STAINLESS STEEL FIXTURE WITH FAUCET LEDGE. SET IN BED OF PUTTY.
- FAUCET: SPREAD FAUCET WITH VANDAL–RESISTANT LEVER HANDLES AND 1.5 GPM AERATOR.
- TRIM: QUARTER–TURN BALL TYPE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, CUP STRAINERS WITH 1–1/2" 17–GAUGE TAILPIECE, 1–1/2" 17–GAUGE CONTINUOUS WASTE, 1–1/2" 17–GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P–TRAP WITH BRASS CLEANOUT AND ESCUTCHEON.

SOI1
- SAND/OIL INTERCEPTOR: MOLDED POLYETHYLENE INTERCEPTOR FOR BELOW–GRADE INSTALLATION, WITH FIELD–ADJUSTABLE RISER SYSTEM, BUILT–IN FLOW CONTROL, 4" INLET AND 4" OUTLET, 250–GALLON LIQUID CAPACITY, AND 100 GPM MAX FLOW RATE. PROVIDE WITH HIGHWAY–RATED COVERS WITH WATER/GAS–TIGHT SEAL AND A MINIMUM 16,000 LBS LOAD CAPACITY, AND ANCHOR KIT FOR HIGH WATER TABLE AREAS.
- SIZING: ESTIMATING AND SHOP DRAINAGE AREA TOTAL = 2,700 FT^2. MINIMUM 6 FT3 FOR FIRST 100 FT2 AND 1 FT3 FOR EACH ADDITIONAL 100 FT2 = 32 FT^3

TD1
- TRENCH DRAIN: 8" WIDE FIBERGLASS TRENCH DRAIN WITH BUILT–IN SLOPE. PROVIDE WITH HEAVY–DUTY SLOTTED DUCTILE IRON GRATE, ENDCAPS, BOTTOM OUTLET, BASKET STRAINER, AND OTHER ACCESSORIES AS REQUIRED TO COMPLETE THE INSTALLATION.

TMV1
- THERMOSTATIC MIXING VALVE: SOLID BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.5 GPM. MAXIMUM TEMPERATURE STOP SET FOR 110°F. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLANS.

UR1
- URINAL (ADA ACCESSIBLE): WHITE VITREOUS CHINA FIXTURE WITH FLUSHING RIM, 3/4" TOP SPUD, AND SIPHON FLUSH ACTION.
- VALVE: EXPOSED CHROME–PLATED DIAPHRAGM TYPE FLUSH VALVE WITH CHLORAMINE–RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, 0.125 GALLON PER FLUSH, OSCILLATING ADA COMPLIANT HANDLE WITH VANDAL–RESISTANT CAP, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP, VACUUM BREAKER, SOLID RING PIPE SUPPORT, AND SWEAT ADAPTER KIT.
- TRIM: SUITABLE CARRIER WITH STANCHIONS TO FLOOR.

WC1
- FLOOR–MOUNTED WATER CLOSET (ADA ACCESSIBLE): TANK TYPE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.6 GALLON PER FLUSH, SIPHON FLUSH ACTION, AND CLOSE–COUPLED TANK WITH TRIP LEVER ON THE WIDE SIDE OF THE STALL.
- TRIM: WHITE OPEN–FRONT CONTOURED, SOLID PLASTIC, HEAVY–DUTY, SEAT–LESS–COVER WITH SELF–SUSTAINING HINGES AND STAINLESS STEEL BOLTS; QUARTER–TURN BALL TYPE ANGLE STOP VALVE WITH RISER AND CHROME–PLATED ESCUTCHEON.

WC2
- FLOOR–MOUNTED WATER CLOSET (NON–ADA): TANK TYPE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.6 GALLON PER FLUSH, SIHPON FLUSH ACTION, AND CLOSE–COUPLED TANK WITH TRIP LEVER ON THE WIDE SIDE OF THE STALL.
- TRIM: WHITE OPEN–FRONT CONTOURED, SOLID PLASTIC, HEAVY–DUTY, SEAT–LESS–COVER WITH SELF–SUSTAINING HINGES AND STAINLESS STEEL BOLTS; QUARTER–TURN BALL TYPE ANGLE STOP VALVE WITH RISER AND CHROME PLATED ESCUTCHEON.

WCO
- WALL CLEANOUT: CAST IRON CLEANOUT TEE, COUNTER–SUNK CAST IRON PLUG WITH GASKET SEAL, AND STAINLESS STEEL ROUND COVER WITH SCREW.

WH1
- WATER HEATER: ELECTRIC, 50 GALLON, 4.5 kW INPUT, 18 GALLON PER HOUR RECOVERY AT 100°F TEMPERATURE RISE AND 140°F OPERATING TEMPERATURE. PROVIDE WITH DUAL–ELEMENT, NON–SIMULTANEOUS HEATING ELEMENTS. PROVIDE ALL WATER CONNECTIONS, VALVES, AND SPECIALS PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- ELECTRICAL REQUIREMENTS: 208V/1ø, 21.6 FLA.
- BASIS OF DESIGN: A.O. SMITH MODEL # DEN–50.

PLUMBING GENERAL NOTES:

- DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR SHALL INVESTIGATE THE PROJECT SITE AND BECOME FULLY AWARE OF ALL FIELD CONDITIONS, CURRENT SYSTEM OPERATION, AS WELL AS COORDINATION REQUIREMENTS. COORDINATE ALL PLUMBING WORK WITH ARCHITECTURAL DRAWINGS, EXISTING CONDITIONS, AND OTHER TRADES PRIOR TO START OF WORK.
- PLUMBING WORK SHALL CONFORM TO APPLICABLE CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- EXACT LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE VERIFIED PRIOR TO ANY INSTALLATION OF CONNECTIONS THEREOF. ALL CONNECTIONS TO EXISTING UTILITIES (E.G. DOMESTIC WATER, SEWER, VENT, AND NATURAL GAS) SHALL BE MADE WITH APPROVAL OF THE ADMINISTRATIVE AUTHORITY AND THE RESPECTIVE UTILITY COMPANIES.
- SANITARY WASTE AND VENT PIPING BELOW GRADE SHALL BE SCHEDULE 40 PVC WITH SOLVENT–WELDED JOINTS.
- SANITARY WASTE AND VENT PIPING ABOVE GRADE SHALL BE NO–HUB CAST IRON IN RETURN AIR PLENUM APPLICATIONS. PVC OR ABS PIPING CAN BE USED IN AREAS OTHER THAN RETURN AIR PLENUMS AS ALLOWED BY CODE.
- SLOPE SANITARY PIPING AS FOLLOWS: 1/4" PER FOOT FOR PIPE SIZES 2–1/2" AND SMALLER, AND 1/8" PER FOOT FOR PIPE SIZES 3" AND LARGER.
- COORDINATE WITH MECHANICAL CONTRACTOR FOR HVAC EQUIPMENT CONDENSATE DRAIN REQUIREMENTS.
- CONDENSATE DRAIN PIPING SHALL BE TYPE M COPPER PIPING WITH WROUGHT FITTINGS AND SOLDERED JOINTS IN RETURN AIR PLENUM APPLICATIONS. PVC CAN BE USED IN AREAS OTHER THAN RETURN AIR PLENUMS AS ALLOWED BY CODE.
- SLOPE CONDENSATE DRAIN PIPING AS FOLLOWS: 1/4" PER FOOT FOR ALL PIPE SIZES.
- PROVIDE WATER SUPPLY SHUT–OFF VALVES ON EACH TOILET ROOM GROUP AND TO MISCELLANEOUS EQUIPMENT.
- PROVIDE SIZE "A" WATER HAMMER ARRESTORS ON SUPPLY TO ALL PLUMBING FIXTURES.
- PROVIDE STOP VALVES ON ALL INDIVIDUAL PLUMBING FIXTURE SUPPLIES.
- COORDINATE SELECTION OF ALL PLUMBING FIXTURES WITH ARCHITECT AND OWNER. ALL HANDICAPPED FIXTURES (WHERE REQUIRED) SHALL COMPLY WITH A.D.A. REQUIREMENTS.
- DOMESTIC WATER PIPING BELOW GRADE SHALL BE TYPE K SOFT COPPER WITH FLARED FITTINGS OR TYPE K HARD COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.
- DOMESTIC WATER PIPING ABOVE GRADE SHALL BE TYPE L COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.
- WHERE ALLOWED BY CODE, CROSS–LINKED POLYETHYLENE (PEX) PIPING MAY BE USED IN LIEU OF COPPER PIPING. ADJUST SIZING OF PIPING FOR REDUCED FREE AREA OF PEX PIPING. PEX PIPE ROUTED IN RETURN AIR PLENUMS MUST MEET THE FLAME SPREAD RATING AND SMOKE DEVELOPED RATING FOR SUCH APPLICATIONS.
- INSULATE NEW DOMESTIC COLD WATER, HOT WATER, HOT WATER RECIRCULATION, AND INTERIOR CONDENSATE DRAIN PIPING WITH MINIMUM 1" FIBERGLASS INSULATION (MINIMUM R–4.0) WITH PAPER COVERING.
- NATURAL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL WITH MALLEABLE FITTINGS. SUPPORT PIPING AT INTERVALS NOT TO EXCEED THOSE LISTED IN TABLE 415.1 OF THE INTERNATIONAL FUEL GAS CODE.
- PROVIDE RUST–INHIBITOR PAINT ON NATURAL GAS PIPING LOCATED EXTERIOR TO THE BUILDING. COORDINATE WITH OTHER TRADES.
- PROVIDE A.G.A. APPROVED GAS COCKS AND DIRT LEGS AT CONNECTIONS TO ALL GAS–FIRED EQUIPMENT.
- INSTALL ALL PLUMBING EQUIPMENT, FIXTURES, VALVES, ETC. PER MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE ADDITIONAL APPURTENANCES PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- INSTALL CLEANOUTS AT EVERY END OF SANITARY PIPING RUNS, AT MINIMUM OF EVERY 100'–0" OF SANITARY PIPING, AND AT EVERY CHANGE IN DIRECTION GREATER THAN 45°. REFER TO SECTION 708 OF THE INTERNATIONAL PLUMBING CODE FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL LABEL ALL PIPING, VALVES AND EQUIPMENT WITH MANUFACTURER STANDARD LABELING SYSTEMS. COORDINATE WITH OWNER FOR FINAL EQUIPMENT DESIGNATIONS.

STATE OF MISSOURI
SCOTT D. GROSHANS
NUMBER
PE–2019012798
PROFESSIONAL ENGINEER

SCOTT D. GROSHANS
LICENSE # PE–2019012798
10/22/2021

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CRASH CHAMPIONS COLLISION REPAIR TEAM

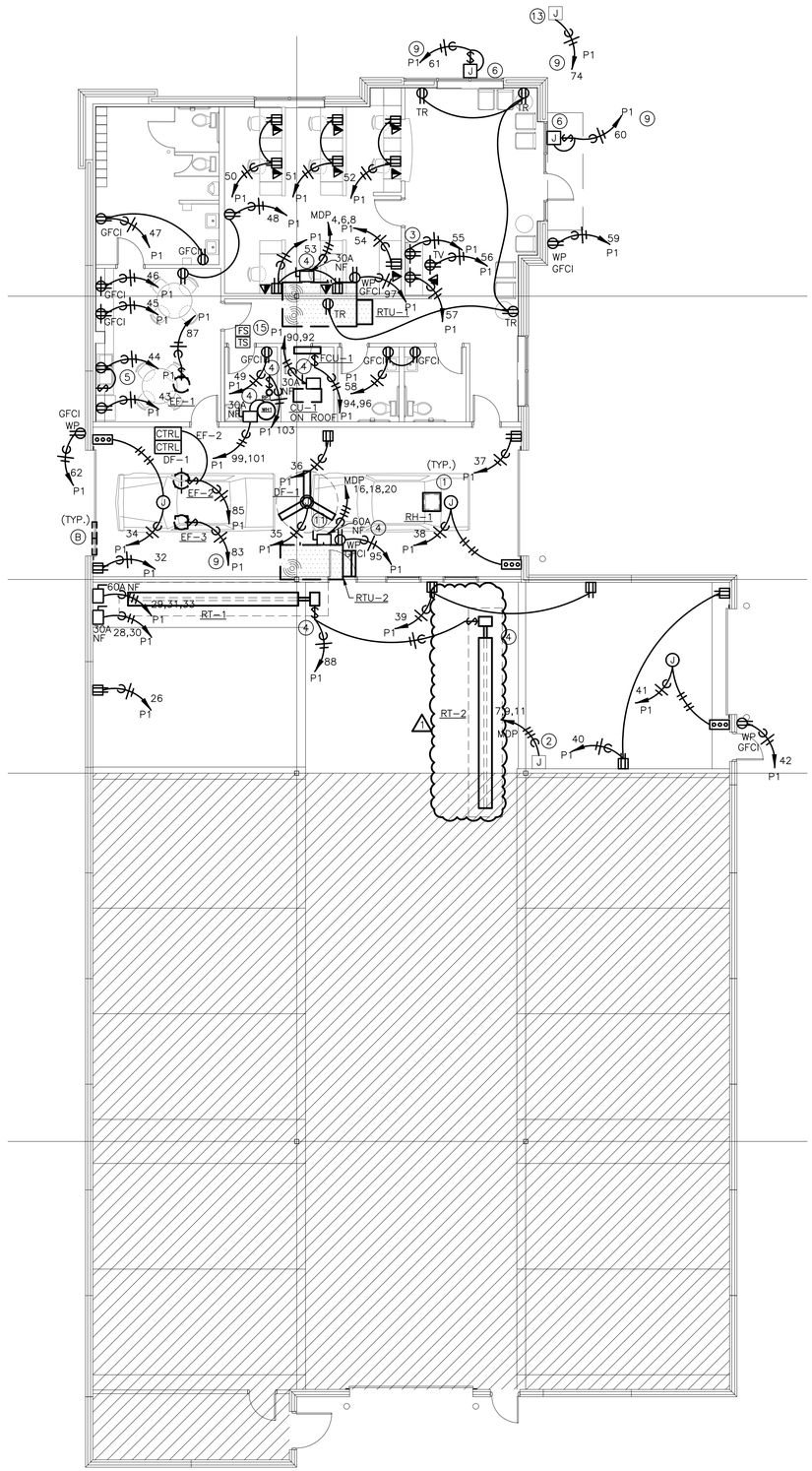
PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
	FOR PERMIT	10 / 22 / 21

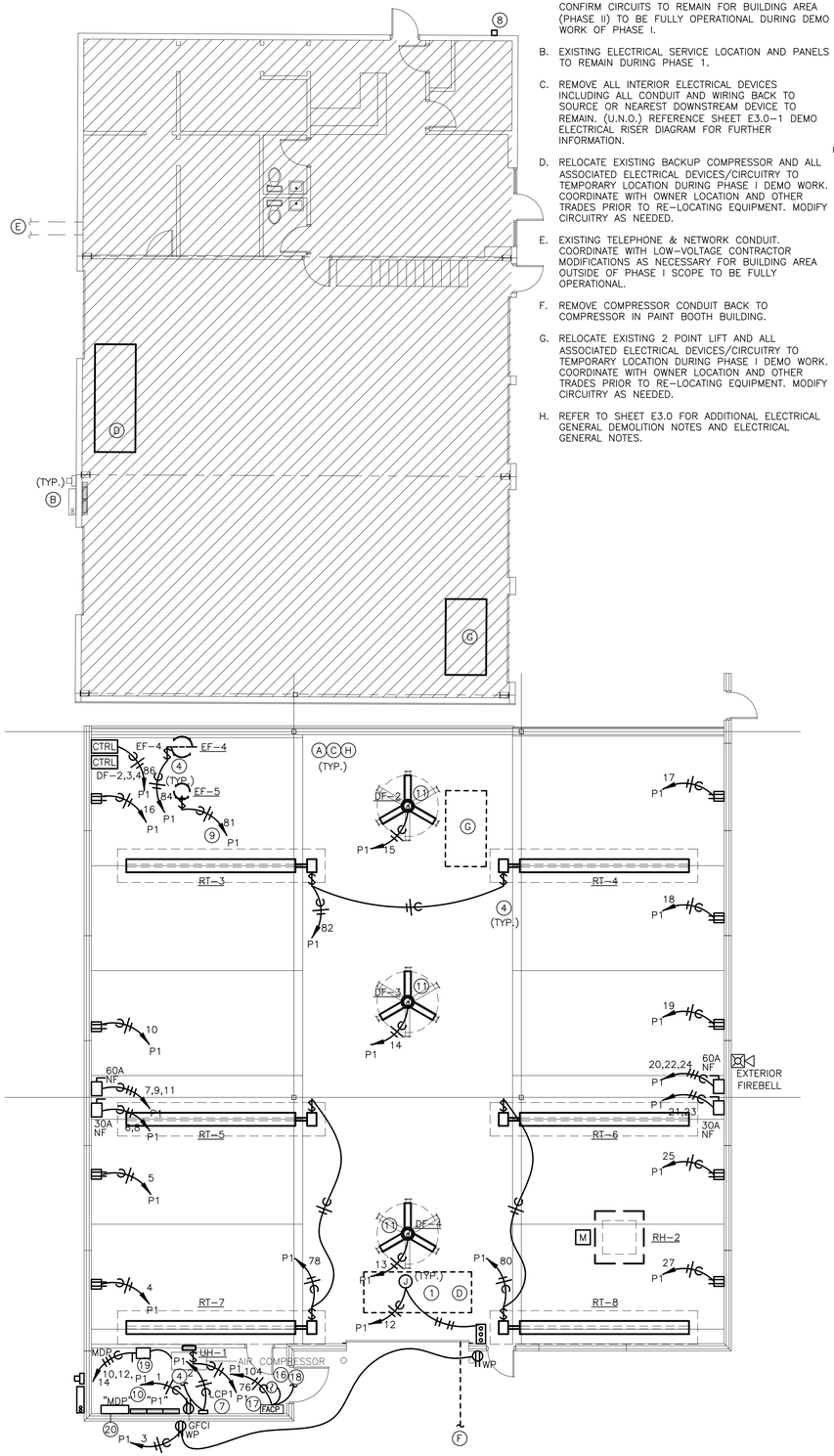
PROJECT NUMBER 21009
DATE ISSUED: 10 / 22 / 21
SHEET NUMBER
P2.0

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PLUMBING DETAILS AND SCHEDULES



2 PHASE II ELECTRICAL POWER PLAN
SCALE: 1/8" = 1'-0"



1 PHASE I ELECTRICAL POWER PLAN
SCALE: 1/8" = 1'-0"

ELECTRICAL POWER DEMOLITION (PER PHASE) NOTES:

A. DEMO WORK MUST BE COMPLETED PER PHASE. CONFIRM CIRCUITS TO REMAIN FOR BUILDING AREA (PHASE II) TO BE FULLY OPERATIONAL DURING DEMO WORK OF PHASE I.

B. EXISTING ELECTRICAL SERVICE LOCATION AND PANELS TO REMAIN DURING PHASE 1.

C. REMOVE ALL INTERIOR ELECTRICAL DEVICES INCLUDING ALL CONDUIT AND WIRING BACK TO SOURCE OR NEAREST DOWNSTREAM DEVICE TO REMAIN. (U.N.O.) REFERENCE SHEET E3.0–1 DEMO ELECTRICAL RISER DIAGRAM FOR FURTHER INFORMATION.

D. RELOCATE EXISTING BACKUP COMPRESSOR AND ALL ASSOCIATED ELECTRICAL DEVICES/CIRCUITRY TO TEMPORARY LOCATION DURING PHASE I DEMO WORK. COORDINATE WITH OWNER LOCATION AND OTHER TRADES PRIOR TO RE–LOCATING EQUIPMENT. MODIFY CIRCUITRY AS NEEDED.

E. EXISTING TELEPHONE & NETWORK CONDUIT. COORDINATE WITH LOW–VOLTAGE CONTRACTOR MODIFICATIONS AS NECESSARY FOR BUILDING AREA OUTSIDE OF PHASE I SCOPE TO BE FULLY OPERATIONAL.

F. REMOVE COMPRESSOR CONDUIT BACK TO COMPRESSOR IN PAINT BOOTH BUILDING.

G. RELOCATE EXISTING 2 POINT LIFT AND ALL ASSOCIATED ELECTRICAL DEVICES/CIRCUITRY TO TEMPORARY LOCATION DURING PHASE I DEMO WORK. COORDINATE WITH OWNER LOCATION AND OTHER TRADES PRIOR TO RE–LOCATING EQUIPMENT. MODIFY CIRCUITRY AS NEEDED.

H. REFER TO SHEET E3.0 FOR ADDITIONAL ELECTRICAL GENERAL DEMOLITION NOTES AND ELECTRICAL GENERAL NOTES.

ELECTRICAL GENERAL NOTES:

- REFER TO SHEET E3.0 FOR ELECTRICAL GENERAL NOTES.

FIRE ALARM GENERAL NOTES:

- SYSTEM SHALL MEET ALL LOCAL AND NATIONAL CODES RECOGNIZED BY THE CITY OF LEAWOOD. CONTRACTOR SHALL SUBMIT FIRE ALARM SHOP DRAWINGS TO THE ENGINEER AND CITY THAT INCLUDE BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS, CABLE AND DEVICE SPECIFICATIONS AND LOCATIONS.
- REFER TO SHEET E3.0 FOR ADDITIONAL FIRE ALARM GENERAL NOTES.

ELECTRICAL PLAN NOTES:

2. PROVIDE JUNCTION BOX FOR OVERHEAD DOOR OPERATOR. PROVIDE OUTLET BOX ADJACENT TO OVERHEAD DOOR FOR PUSH–BUTTON CONTROLS. COORDINATE WITH DOOR OPERATOR SUPPLIER FOR EXACT LOCATIONS AND SPECIFIC ELECTRICAL REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER AND CONTROL WIRING AS REQUIRED.
3. PROVIDE JUNCTION BOX FOR CONNECTION TO LIFT EQUIPMENT. VERIFY EXACT LOCATION AND SPECIFIC REQUIREMENTS PRIOR TO ROUGH IN. COORDINATE WITH OWNER LOCATION AND PHASING TO RELOCATE LIFT. CONFIRM AMP RATING REQUIRED PRIOR TO ORDERING ELECTRICAL DEVICES FOR NEW CIRCUIT BREAKER INSTALL IN NEW PANELBOARD "P1". PANELBOARD SCHEDULE IS AN ASSUMPED CIRCUIT BREAKER FOR LOAD CALCULATIONS ONLY.
4. COORDINATE DEVICE LOCATIONS WITH ARCHITECTURAL CASEWORK ELEVATIONS.
5. PROVIDE CONNECTION AND DISCONNECT ON MECHANICAL EQUIPMENT. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR. REFER TO SHEET M2.0 FOR ADDITIONAL INFORMATION.
6. PROVIDE RECEPTACLE AND TOGGLE SWITCH FOR GARBAGE DISPOSER. CONCEAL RECEPTACLE BEHIND SINK PRIVACY PANEL. MOUNT SWITCH AT SAME HEIGHT AS ADJACENT ABOVE–COUNTER RECEPTACLES. CIRCUIT SWITCH TO CONTROL RECEPTACLE. COORDINATE EXACT LOCATIONS WITH PLUMBING CONTRACTOR.
7. PROVIDE JUNCTION BOX AND DISCONNECT SWITCH FOR EXTERIOR SIGNAGE. COORDINATE ALL REQUIREMENTS WITH SIGN MANUFACTURER. COORDINATE FINAL LOCATION WITH OWNER/ARCHITECT PRIOR TO INSTALL.
8. PROVIDE NEW LIGHTING CONTROL PANEL 'LCP1'. REFERENCE SHEET E4.0 LIGHTING CONTROL DEVICE SCHEDULE FOR ADDITIONAL INFORMATION.
9. PROVIDE NEW EXTERIOR INTERMATIC PHOTOCELL LEGRAND EM–24A2. MOUNT ON NORTH SIDE EXTERIOR WALL OF SECOND STORY. ROUTE CIRCUIT FROM PHOTOCELL TO 'LCP1' PANEL FOR A COMPLETE AND OPERABLE INSTALL.
10. ROUTE CIRCUIT FROM PANEL VIA LCP1. REFERENCE LCP1 SCHEDULE FOR CIRCUIT # AND PROGRAMMING SUMMARY ON SHEET E4.0 FOR FURTHER INFORMATION.
11. PROVIDE NEW 600A 120/208 V 3 PHASE PANEL IN GENERAL LOCATION SHOWN. REFERENCE SHEET E3.0 FOR ELECTRICAL RISER DIAGRAM AND SHEET E5.0 PANELBOARD SCHEDULES FOR FURTHER INFORMATION.
12. PROVIDE JUNCTION BOX FOR BIG ASS FAN. PROVIDE BIG ASS FAN CONTROL DEVICE. COORDIATE EXACT LOCATION WITH OWNER AND POWER REQUIREMENTS PER MANUFACTURER'S SPECIFICATIONS PRIOR TO INSTALL.
13. PROVIDE CONNECTION FOR __ WATT 280/1 PHASE ELECTRIC/GAS WATER HEATER. PROVIDE NEMA 3R __A DISCONNECT SWITCH FOR WATER HEATER. COORDINATE ALL WORK WITH PLUMBING CONTRACTOR AND ENSURE NEC CLEARANCES ARE MAINTAINED. ROUTE CIRCUIT TO DISCONNECT AND FROM DISCONNECT TO WATER HEATER. REFERENCE PLUMBING SHEETS FOR ADDITIONAL INFORMATION.
14. EXTEND CIRCUITRY AS NECESSARY FROM PYLON SIGN TO NEW CIRCUIT BREAKER ON PANEL "P1".
15. PROVIDE SPRINKLER FLOW AND TAMPER SWITCH. FIELD VERIFY EXACT LOCATION WITH FIRE SPRINKLER CONTRACTOR AND FIRE DEPARTMENT CONNECTION POINT. COORDINATE REQUIREMENTS WITH FIRE SPRINKLER CONTRACTOR.
16. PROVIDE SMOKE DETECTION DEVICE IN GENERAL LOCATION SHOWN.
17. PROVIDE FIRE CONTROL PANEL IN APPROXIMATE LOCATION SHOWN. FIELD VERIFY EXACT LOCATION WITH FIRE SPRINKLER CONTRACTOR AND FIRE DEPARTMENT CONNECTION POINT.
18. PROVIDE POWER FOR FIRE ALARM CONTROL PANEL AND CONNECT TO EXTERIOR FIRE ALARM BELL.
19. PROVIDE DISCONNECT AND CONNECTION TO AIR COMPRESSOR PROVIDED BY OTHERS. COORDINATE FINAL LOCATION PRIOR TO INSTALL. CONFIRM POWER REQUIREMENTS PRIOR TO ORDERING DISCONNECT/CIRCUIT BREAKER/WIRING. REFERENCE MANUFACTURER SPECIFICATIONS FOR FURTHER INFORMATION.

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SCOTT D. GROSHANS
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12/06/2021
SCOTT D. GROSHANS
LICENSE # PE–2019012798

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CRASHCHAMPIONS COLLISION REPAIR TEAM

PROPOSED BUILDING FOR: CRASH CHAMPIONS

451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
	FOR PERMIT	10 / 22 / 21
1	CITY REVIEW COMMENTS	12 / 06 / 21

PROJECT NUMBER 21009
DATE ISSUED: 11 / 09 / 21

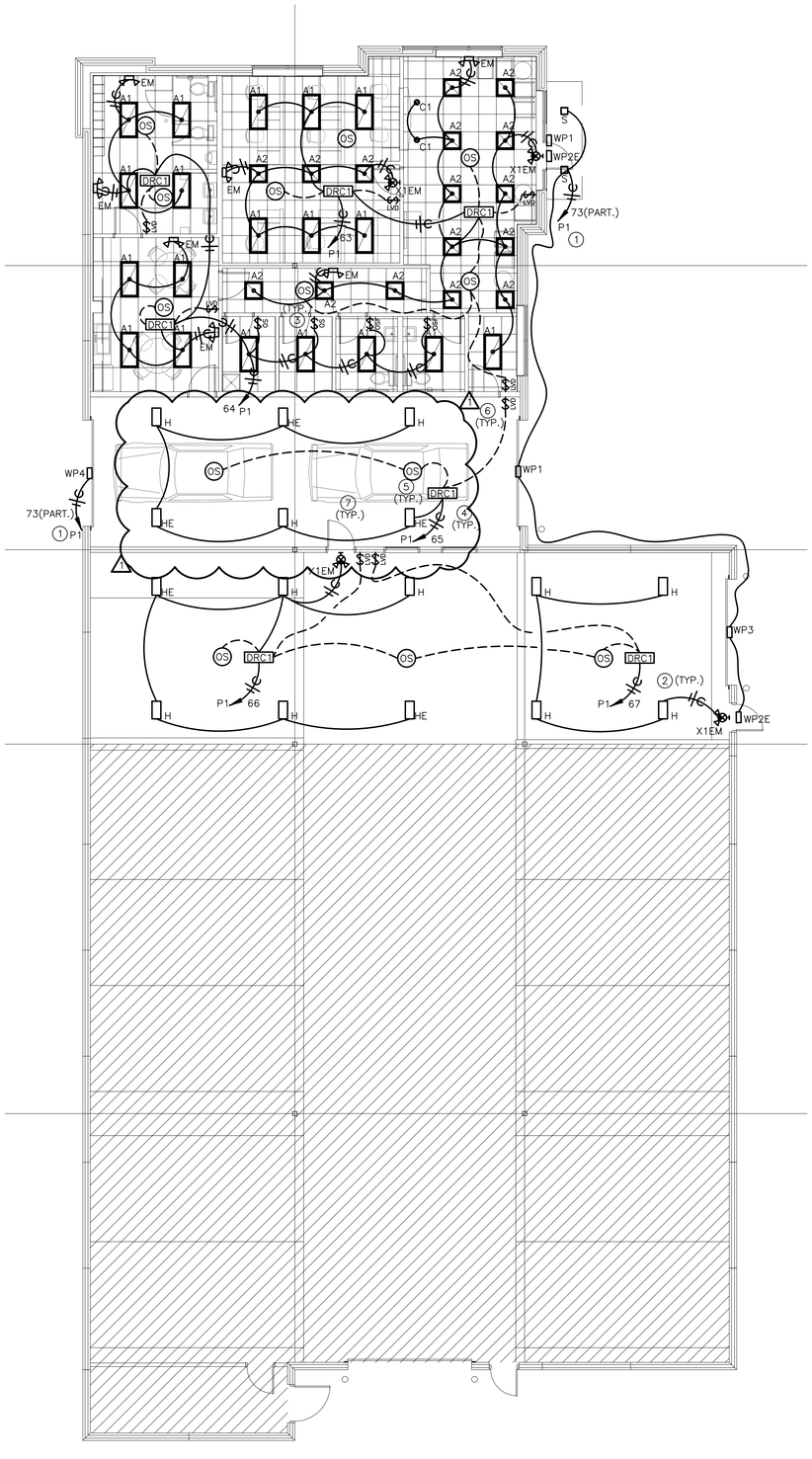
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ELECTRICAL POWER PLANS

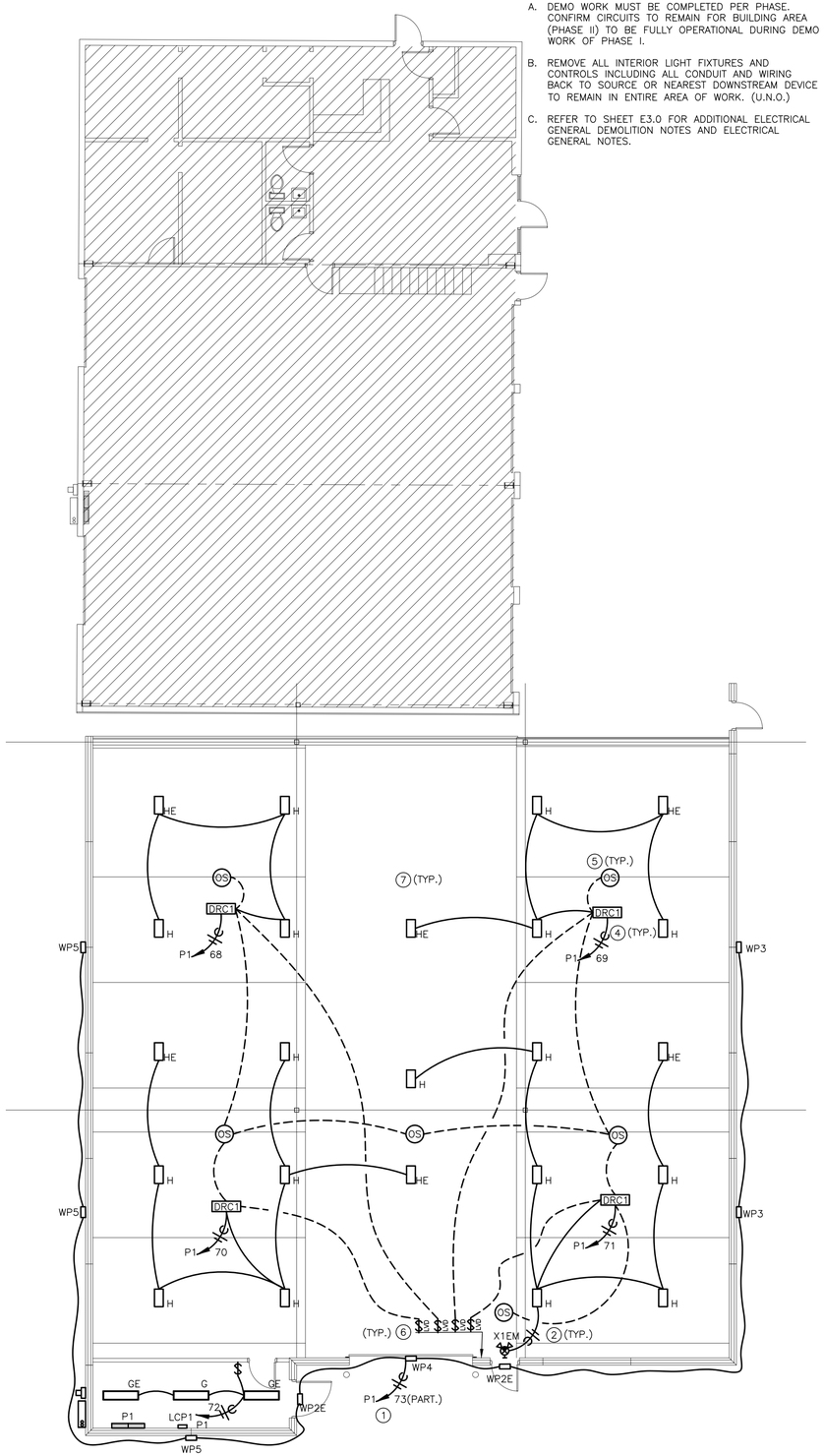
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Dec 06, 2021 – 2:08pm – USER: Scott Groshans
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2 PHASE II ELECTRICAL LIGHTING PLAN
SCALE: 1/8" = 1'-0"



1 PHASE I ELECTRICAL LIGHTING PLAN
SCALE: 1/8" = 1'-0"

ELECTRICAL LIGHTING DEMOLITION (PER PHASE) NOTES:

A. DEMO WORK MUST BE COMPLETED PER PHASE. CONFIRM CIRCUITS TO REMAIN FOR BUILDING AREA (PHASE II) TO BE FULLY OPERATIONAL DURING DEMO WORK OF PHASE I.

B. REMOVE ALL INTERIOR LIGHT FIXTURES AND CONTROLS INCLUDING ALL CONDUIT AND WIRING BACK TO SOURCE OR NEAREST DOWNSTREAM DEVICE TO REMAIN IN ENTIRE AREA OF WORK. (U.N.O.)

C. REFER TO SHEET E3.0 FOR ADDITIONAL ELECTRICAL GENERAL DEMOLITION NOTES AND ELECTRICAL GENERAL NOTES.

ELECTRICAL GENERAL NOTES:

- REFER TO E3.0 FOR ELECTRICAL GENERAL NOTES.

⊖ ELECTRICAL LIGHTING PLAN NOTES:

1. ROUTE CIRCUIT FROM PANEL VIA LCP1. REFERENCE LCP1 SCHEDULE FOR CIRCUIT # AND PROGRAMMING SUMMARY ON SHEET E3.0 FOR FURTHER INFORMATION.
2. ROUTE UNSWITCHED HOT TO ALL EMERGENCY LIGHT FIXTURES AND EXIT SIGNS.
3. PROVIDE AND INSTALL NEW OCCUPANCY SENSING WALL MOUNTED LIGHT SWITCH. REFERENCE LIGHTING CONTROL DEVICE SCHEDULE ON SHEET E3.0 FOR ADDITIONAL INFORMATION.
4. PROVIDE AND INSTALL NEW ROOM CONTROLLER, CONNECT TO CEILING MOUNT SENSORS AND LOW VOLTAGE SWITCHES IN ROOM PER MANUFACTURERS RECOMMENDATIONS AND AS SHOWN ON THE DRAWINGS. REFERENCE LIGHTING CONTROL DEVICE SCHEDULE ON SHEET E3.0 FOR ADDITIONAL INFORMATION.
5. PROVIDE AND INSTALL NEW CEILING MOUNTED OCCUPANCY SENSOR. CONNECT TO ROOM CONTROLLERS AND LOW VOLTAGE SWITCHES PER MANUFACTURERS RECOMMENDATIONS AND AS SHOWN ON DRAWINGS. REFERENCE LIGHTING CONTROL DEVICE SCHEDULE ON SHEET E3.0 FOR ADDITIONAL INFORMATION.
6. PROVIDE LOW VOLTAGE SWITCH FOR LIGHTING CIRCUITS AS SHOWN. CONNECT SWITCH TO ROOM CONTROLLER IN ROOM. REFERENCE SHEET E3.0 FOR LIGHTING CONTROL DEVICE SCHEDULE FOR FURTHER INFORMATION.
7. REFERENCE SHEET ES1 FOR SITE LIGHTING FIXTURE SCHEDULE AND SHEET E4.0 FOR LIGHT FIXTURE SCHEDULE FOR FURTHER INFORMATION.

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CRASHCHAMPIONS COLLISION REPAIR TEAM

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451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

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PROJECT NUMBER 21009
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SHEET NUMBER
E2.0

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ELECTRICAL LIGHTING PLANS

LINETYPES LEGEND:

- NEW
- EXISTING OR BY OTHERS
- DEMOLITION

LIGHTING LEGEND:

- CEILING MOUNTED LIGHT FIXTURE, 2'x2' OR 2'x4'
- CEILING MOUNTED LIGHT FIXTURE, 2'x2' OR 2'x4' (NIGHT LIGHT OR EMERGENCY CIRCUIT)
- STRIP LIGHT FIXTURE. REFER TO FIXTURE SCHEDULE FOR LENGTH.
- WALL-MOUNT SCONCE OR WALL BRACKET LIGHT FIXTURE.
- RECESSED WALL WASH CAN LIGHT FIXTURE.
- RECESSED, SURFACE, OR STEM HUNG LIGHT FIXTURE.
- SINGLE FACE EXIT LIGHT FIXTURE, WALL OR CEILING MOUNT, WITH FIELD CONFIGURABLE ARROWS. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. SHADED AREA INDICATES EXIT LIGHT FACE.
- DOUBLE FACE EXIT LIGHT FIXTURE, WALL OR CEILING MOUNT, WITH FIELD CONFIGURABLE ARROWS. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. SHADED AREA INDICATES EXIT LIGHT FACE.
- COMBINATION SINGLE FACE EXIT/EMERGENCY LIGHT FIXTURE, WALL OR CEILING MOUNT, WITH FIELD CONFIGURABLE ARROWS. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. SHADED AREA INDICATES EXIT LIGHT FACE.

  NOTE: REFER TO LIGHT FIXTURE SCHEDULE AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND MOUNTING HEIGHTS.

POWER LEGEND:

- INDICATES ABOVE COUNTER (TYP)
- DUPLEX RECEPTACLE MOUNTED AT +18"AFF TO CENTER OF RECEPTACLE (UNO). ABOVE COUNTER RECEPTACLES SHALL BE +48"AFF (UNO).
- DUPLEX ISOLATED GROUND RECEPTACLE MOUNTED AT +18"AFF TO CENTER OF RECEPTACLE (UNO). ABOVE COUNTER RECEPTACLES SHALL BE +48"AFF (UNO).
- DUPLEX RECEPTACLE ON STAND-BY GENERATOR POWER, MOUNTED AT +18"AFF TO CENTER OF RECEPTACLE (UNO). RECEPTACLES SHOWN ABOVE COUNTER SHALL BE +48"AFF (UNO).
- FLOOR-MOUNTED DUPLEX OR FOURPLEX RECEPTACLE MOUNTED IN PVC FLOORBOX, OR POKE-THRU
- SPECIAL RECEPTACLE, NUMBER REFERS TO "NEMA" CONFIGURATION. MOUNT AT +18"AFF TO CENTER OF RECEPTACLE (UNO).
- FOURPLEX RECEPTACLE MOUNTED AT +18"AFF TO CENTER OF RECEPTACLE (UNO). RECEPTACLES SHOWN TO BE ABOVE COUNTER SHALL BE +48"AFF (UNO)
- FLUSH MOUNT COMBINATION POWER AND VOICE/DATA FLOORBOX.
- SINGLE POLE WALL MOUNT TOGGLE SWITCH. MOUNT AT +48"AFF TO CENTER OF SWITCH.
- WALL MOUNTED OCCUPANCY SENSOR SWITCH. MOUNT AT +48"AFF TO CENTER OF SWITCH.
- WALL MOUNTED OCCUPANCY SENSOR SWITCH WITH 0-10V DIMMING CONTROL. MOUNT AT +48"AFF TO CENTER OF SWITCH.
- WALL MOUNTED LOW VOLTAGE SWITCH WITH 0-10V DIMMING CONTROL. MOUNT AT +48"AFF TO CENTER OF SWITCH.
- OS CEILING MOUNTED OCCUPANCY SENSOR.
- DRC1 ROOM CONTROLLER/POWER PACK FOR LIGHT FIXTURE CONTROL. DEVICE SHALL BE CONCEALED IN CEILING.
- VOICE OPENING. PROVIDE RING WITH STRING TO ABOVE CEILING. DEVICES SHOWN TO BE COUNTER SHALL BE +48"AFF (UNO).
- DATA OPENING. PROVIDE RING WITH STRING TO ABOVE CEILING. DEVICES SHOWN TO BE COUNTER SHALL BE +48"AFF (UNO).
- COMBINATION VOICE/DATA OPENING. PROVIDE RING WITH STRING TO ABOVE CEILING. DEVICES SHOWN TO BE COUNTER SHALL BE +48"AFF (UNO).
- FLUSH FLOOR MOUNT VOICE/DATA OUTLET MOUNTED IN PVC FLOORBOX.
- DISCONNECT SWITCH, STARTER, & COMBINATION STARTER/DISCONNECT SWITCH. SIZE AS INDICATED ON DRAWINGS.
- ELECTRICAL PANEL BOARD, FLUSH OR SURFACE MOUNT
- J JUNCTION BOX

  NOTE: LINE THROUGH DEVICE INDICATES TO BE MOUNTED ABOVE COUNTERTOP OR CABINET. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS IF NOT INDICATED ON POWER PLAN.

  REFER TO LIGHTING CONTROL DEVICE SCHEDULE AND ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION.

WIRING LEGEND:

- HOMERUN TO PANELBOARD WITH NUMBER AND SIZE OF CONDUCTORS INDICATED ON PLANS.
- GROUNDED CONDUCTOR.
- CONDUIT OR CIRCUIT BREAK/CONTINUATION.
- CONDUIT WITH ENDCAP FOR FUTURE USE.
- GROUNDING SOURCE.

FIRE ALARM LEGEND:

- SMOKE DETECTOR
- COMBINATION AUDIO/VISUAL DEVICE, +80"AFF
- VISUAL DEVICE, +80"AFF
- PULL STATION, +48"AFF
- FSD FIRE/SMOKE DAMPER
- FS / TS SPRINKLER FLOW AND TAMPER SWITCH
- SUPPLY DUCT/PLENUM MOUNT SMOKE DETECTOR
- RETURN DUCT/PLENUM MOUNT SMOKE DETECTOR
- FACP FIRE ALARM CONTROL PANEL
- FAAP FIRE ALARM ANNUNCIATOR PANEL
- DH FIRE ALARM DOOR HOLD
- DR FIRE ALARM DOOR RELEASE
- DACT FIRE SPRINKLER FLOW/TAMPER SUPVERVISORY PANEL. PROVIDE (2) DEDICATED PHONE LINES AS REQUIRED.

SECURITY AND CONTROLLED ACCESS LEGEND:

- DVR DIGITAL VIDEO RECORDER
- ACP ACCESS CONTROL PANEL
- PTZ PAN TILT ZOOM VIDEO CAMERA
- FIXED VIDEO CAMERA
- IC INTERCOM STATION
- ICM INTERCOM MASTER STATION
- LRR LONG RANGE READER
- REX REQUEST TO EXIT DEVICE
- PB PANIC BUTTON
- DC DOOR CONTACT
- CR CARD READER
- ES ELECTRIC STRIKE
- EL ELECTRIFIED LOCK
- ML MAGNETIC LOCK

ABBREVIATIONS LEGEND:

AFF	ABOVE FINISHED FLOOR
ED	EXISTING TO BE DEMOLISHED
EM	EMERGENCY
ER	EXISTING TO BE RELOCATED
ETR	EXISTING TO REMAIN
GFCI	GROUND FAULT CURRENT INTERRUPTER
NL	NIGHT LIGHT
TR	TAMPER RESISTANT
UNO	UNLESS NOTED OTHERWISE
WP	WEATHER PROTECTED COVER / GFCI

ELECTRICAL GENERAL DEMOLITION NOTES:

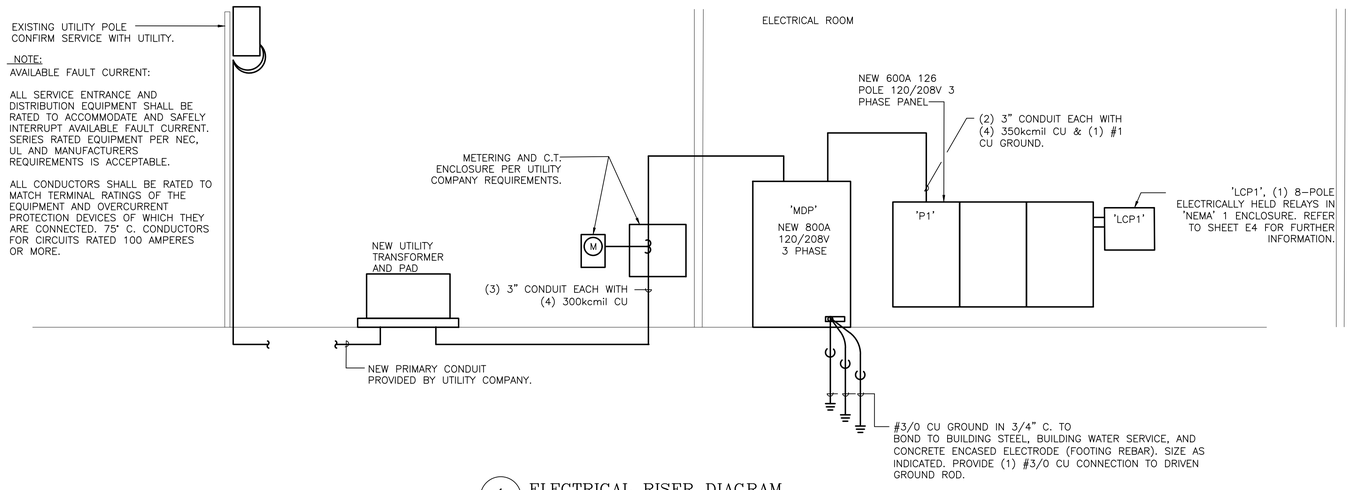
- REFERENCE ARCHITECTURAL DRAWINGS FOR FULL EXTENT OF DEMOLITION WORK AND PHASING. NOTIFY ARCHITECT, ENGINEER, AND/OR OWNER, AS APPLICABLE, OF ANY CONFLICTS OR DISCREPANCIES BETWEEN DRAWINGS AND JOBSITE CONDITIONS PRIOR TO SUBMITTING BID.
- COORDINATE DEMOLITION AND REMOVAL OF EXISTING EQUIPMENT AND LIGHTING SYSTEMS WITH ARCHITECTURAL PHASING DRAWINGS AND OWNER TO ALLOW NECESSARY SYSTEMS TO REMAIN OPERATIONAL DURING CONSTRUCTION.
- UNLESS NOTED OTHERWISE, DISPOSE OF ALL ELECTRICAL EQUIPMENT, LIGHT FIXTURES, AND DEVICES SHOWN TO BE REMOVED. COORDINATE WITH THE OWNER THE ITEMS TO BE SALVAGED, AND THE LOCATION FOR STORAGE. AVOID DAMAGING SALVAGED ITEMS DURING DEMOLITION WORK AND DURING TRANSPORT TO OWNER'S DESIGNATED STORAGE LOCATION.
- WHERE ALTERATION OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, RACEWAYS, OR WIRING DEVICES AFFECTS EXISTING SURFACES/FINISHES: REPAIR/PAINT AFFECTED SURFACE TO MATCH EXISTING ADJACENT SURFACE IN ACCORDANCE WITH OWNER REQUIREMENTS. MAINTAIN FIRE RATING OF ALL FLOORS, WALLS, AND CEILINGS THAT ARE RATED.
- WHERE DEMOLITION WORK INTERRUPTS ELECTRICAL CONTINUITY OF CIRCUITS THAT ARE TO REMAIN IN USE: PROVIDE NECESSARY DEVICES AND RELATED CIRCUITRY TO MAINTAIN ELECTRICAL CONTINUITY IN ACCORDANCE WITH OWNER REQUIREMENTS. RE-CIRCUIT REUSED ELECTRICAL EQUIPMENT, LIGHT FIXTURES, AND WIRING DEVICES PREVIOUSLY POWERED FROM DEMOLISHED EQUIPMENT TO NEW OR TEMPORARY EQUIPMENT AS NEEDED.
- COORDINATE DISCONNECTION OF POWER TO EQUIPMENT BEING DEMOLISHED / REMOVED / RELOCATED WITH OTHER TRADES PRIOR TO START OF WORK. REMOVE ALL ELECTRICAL EQUIPMENT, LIGHT FIXTURES, RACEWAYS, WIRING DEVICES, AND RELATED CIRCUITRY NOT BEING REUSED IN ALL ACCESSIBLE AREAS INCLUDING FLOORS, WALLS, AND CEILINGS THAT ARE TO BE REMOVED. ELECTRICAL EQUIPMENT, RACEWAYS, AND RELATED CIRCUITRY ABANDONED IN PLACE SHALL BE PERMANENTLY DISCONNECTED FROM ALL POWER SOURCES, INSULATED FROM CONTACT WITH OTHER LIVE ELECTRICAL WIRING/DEVICES, AND IDENTIFIED AT TERMINATIONS AS NO LONGER BEING IN SERVICE. CABLES/WIRING NOT BEING REUSED SHALL BE REMOVED UNLESS IDENTIFIED FOR FUTURE USE. CARE SHOULD BE TAKEN DURING THE REMOVAL PROCESS TO PROTECT THE EXISTING REUSED CABLES/WIRING FROM DAMAGE.

ELECTRICAL GENERAL NOTES:

- DRAWINGS ARE SCHEMATIC IN NATURE AND BASED ON PRELIMINARY SITE OBSERVATION AND ORIGINAL DESIGN DRAWINGS (WHEN AVAILABLE). PRIOR TO BID, CONTRACTOR SHALL INVESTIGATE THE PROJECT SITE AND BECOME FULLY AWARE OF ALL FIELD CONDITIONS, CURRENT SYSTEM OPERATION AS WELL AS COORDINATION REQUIREMENTS. COORDINATE ALL MECHANICAL WORK WITH ARCHITECTURAL DRAWINGS, EXISTING CONDITIONS AND OTHER TRADES PRIOR TO BID OR START OF WORK.
- ELECTRICAL WORK SHALL CONFORM TO APPLICABLE CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION. REFER TO ARCHITECTURAL CODE PLANS FOR SPECIFIC CODE REFERENCES.
- COORDINATE ELECTRICAL WORK WITH ALL OTHER PROJECT TRADES (E.G. ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING, FIRE SPRINKLER, ETC.).
- COORDINATE EXACT LOCATIONS OF ALL LIGHT FIXTURES AND ELECTRICAL DEVICES WITH ARCHITECTURAL DRAWING AND OTHER TRADES PRIOR TO ROUGH-IN. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRE TO PROPERLY INSTALL ALL SYSTEMS.
- INSTALL PULL STRING IN ALL EMPTY CONDUIT/RACEWAY. TERMINATE CONDUIT STUB-UP WITH A NYLON BUSHING.
- COLOR FOR RECEPTACLES, SWITCHES, NETWORK DEVICES AND COVER PLATES SHALL MATCH. COLOR SHALL MATCH AND BE SELECTED AS BRIGHT WHITE UNLESS NOTED OTHERWISE. CONFIRM EXACT COLOR WITH ARCHITECT PRIOR TO ORDER.
- ELECTRICAL CONTRACTOR SHALL INSPECT ALL ELECTRICAL EQUIPMENT TO REMAIN. REPORT ANY DEFICIENCIES TO OWNER PRIOR TO START OF WORK.
- ALL CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) AS REQUIRED BY THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE (NEC). ALL INSTALLATIONS SHALL BE PER NEC REQUIREMENTS.
- AT CONTRACTOR'S OPTION, MC CABLE CAN BE USED FOR CIRCUITING CONNECTIONS TO RECEPTACLES AND LIGHTING. "HOME RUNS" SHALL BE ROUTED IN CONDUIT. ALL INSTALLATIONS SHALL BE PER NEC REQUIREMENTS.
- CONTRACTOR SHALL VERIFY ALL ROUGH-IN LOCATIONS AND QUANTITIES FOR GENERAL USE POWER AND DATA WITH OWNER AND/OR ARCHITECT PRIOR TO INSTALLATION.
- CIRCUITS FOR GENERAL USE POWER SHALL HAVE A MAXIMUM OF 6 RECEPTACLES ON A CIRCUIT (A SINGLE 4-PLEX RECEPTACLE COUNTS FOR 2 OF THE ALLOWED 6 RECEPTACLES).
- ALL WIRE SIZES LISTED ON PLANS ASSUME COPPER CONDUCTORS ARE USED (UNLESS NOTED OTHERWISE).
- CONTRACTOR SHALL LABEL ALL RECEPTACLES, BOXES, PANELBOARDS, ETC. WITH PANEL, CIRCUIT NUMBER, ETC. PER INDUSTRY STANDARDS. COORDINATE WITH OWNER FOR FINAL PANEL AND EQUIPMENT DESIGNATIONS.

FIRE ALARM SYSTEM NOTES:

- CONTRACTOR SHALL PROVIDE ALL ENGINEERING, LABOR, MATERIALS, TRANSPORTATION, TOOLS AND APPLIANCES REQUIRED IN THE PERFORMANCE OF ALL OPERATIONS REQUIRED FOR THE INSTALLATION OF A COMPLETE, FULLY FUNCTIONAL AND CODE COMPLIANT FIRE ALARM SYSTEM OR SYSTEM MODIFICATION IN THE AREAS OF WORK.
- THE FIRE ALARM SYSTEM CONTRACTOR MUST PROVIDE A SYSTEM DESIGN WHICH MEETS ALL APPLICABLE CODES. NOTE THAT ENGINEERING DRAWINGS ARE CONCEPTUAL AND PROVIDE FOR INFRASTRUCTURE AND BASIC LAYOUT OF THE SYSTEM. THE FIRE ALARM SYSTEM CONTRACTOR MUST CHECK THE PROVIDED LAYOUT AND AUGMENT THE DESIGN AS NEEDED TO PROVIDE A COMPLIANT SYSTEM. ANY DESIGN INCONSISTENCIES OR CONFLICTS WITHIN THIS DOCUMENT MUST BE RESOLVED THROUGH THE REQUEST FOR INFORMATION PROCESS.
- THE CONTRACTOR MUST CERTIFY THE DOCUMENTS THEY PRODUCE MEET AND COMPLY WITH ALL APPLICABLE CODES AND THE SYSTEM IS DESIGNED IN ACCORDANCE WITH SAID CODES. NOTING NON-COMPLIANCE ON DRAWINGS OR DOCUMENTS IS NOT ACCEPTABLE. ANY DESIGN INCONSISTENCIES OR CONFLICTS WITHIN THIS DOCUMENT SHALL BE RESOLVED PRIOR TO BID.
- THE APPROXIMATE LOCATIONS OF RELATED DEVICES ARE INDICATED ON ORIGINAL DRAWINGS. THESE DRAWINGS ARE NOT INTENDED TO GIVE COMPLETE AND EXACT DETAILS IN REGARD TO LOCATION OF DEVICES, APPARATUS, ETC. EXACT DEVICE LOCATIONS AND QUANTITY ARE TO BE DETERMINED BY ACTUAL MEASUREMENT AT THE BUILDING AND WILL IN ALL CASES BE SUBJECT TO THE APPROVAL OF THE OWNER. ALL DRAWING LOCATION CHANGES, ADDITIONS OR DELETIONS SHALL BE MADE BY A LICENSED FIRE PROTECTION ENGINEER OR LICENSED FIRE ALARM PLANNER REPRESENTING THE FIRE ALARM SYSTEMS CONTRACTOR, AND APPROVED BY THE OWNER. THE OWNER RESERVES THE RIGHT TO MAKE ANY REASONABLE CHANGES IN THE LOCATIONS INDICATED WITHOUT ADDITIONAL COST.
- PROVIDE TEMPORARY FIRE ALARM DETECTION AND NOTIFICATION FUNCTIONS IN CONSTRUCTION AREAS AS REQUIRED BY THE PHASING OF THE PROJECT. COORDINATE EXACT REQUIREMENTS WITH OWNER PRIOR TO BID.



1 ELECTRICAL RISER DIAGRAM
SCALE: N/A

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CRASHCHAMPIONS COLLISION REPAIR TEAM

PROPOSED BUILDING FOR: CRASH CHAMPIONS

451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
	FOR PERMIT	10 / 22 / 21
1	CITY REVIEW COMMENTS	12 / 06 / 21

PROJECT NUMBER 21009
DATE ISSUED: 11 / 09 / 21

SHEET NUMBER
E3.0

ELECTRICAL DETAILS & GENERAL NOTES

Dec 06, 2021 - 2:08pm - USER Scott Groshans
C:\Users\Scott Groshans\Desktop\Revit Local Files (5by5)\5BY5 ACTIVE PROJECTS\2021000051 ELEC.dwg
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Oct 22, 2021 – 10:35am – USER Scott Groshans
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LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER AND MODEL #	LIGHT SOURCE	WATTS	MINIMUM LUMENS	VOLTAGE	CRI	COLOR TEMP	DIMMABLE	FINISH	DESCRIPTION	NOTES
A1	METALUX 24FR-LD4-65-UNV-L835-CD1	INTEGRAL LED	60	6700	UNV	80	3500	0-10V / 10%	WHITE	2'X4' LED RECESSED TROFFER.	1-5
A2	METALUX 22FR-LD4-32-UNV-L835-CD1	INTEGRAL LED	30	3300	UNV	80	3500	0-10V / 10%	WHITE	2'X2' LED LIGHT TROFFER WITH CENTER BASKET, 3500K COLOR TEMPERATURE DIMMABLE UNIVERSAL VOLTAGE DRIVER.	1-5
C1	PORTFOLIO LD6B-20-DO10-EUB10208035-6LBM1LI	INTEGRAL LED	22	2000	UNV	80	3500	0-10V / 10%	WHITE	6" ROUND LED CAN LIGHT FIXTURE WITH LED LIGHT SOURCE, 3500K COLOR TEMPERATURE.	1-5
EM	SURE LITES XR-6/9-C	INTEGRAL LED	6	1100	UNV	80	-	0-10V / 10%	WHITE	EMERGENCY WALL MOUNTED FIXTURE. FIXTURE SHALL BE PROVIDED WITH INTEGRAL EMERGENCY 90 MINUTE BATTERY PACK.	1-5
H	BUILDERS PACK TR08-165W-2FT-40K-PDN	INTEGRAL LED	165	20900	UNV	80	4000	0-10V / 10%	WHITE	LED HIGHBAY CABLE MOUNTED, 20,900 LUMEN PACKAGE. 4000K PROVIDE WITH WIREGUARD. PROVIDE WITH POWER CORD AND AIRCRAFT CABLE. CONFIRM LENGTHS NEEDED PRIOR TO ORDERING.	1-5
HE	BUILDERS PACK TR08-165W-2FT-40K-PDN -EM	INTEGRAL LED	165	20900	UNV	80	4000	0-10V / 10%	WHITE	LED HIGHBAY CABLE MOUNTED, 20,900 LUMEN PACKAGE. 4000K PROVIDE WITH WIREGUARD. PROVIDE WITH POWER CORD AND AIRCRAFT CABLE. CONFIRM LENGTHS NEEDED PRIOR TO ORDERING.FIXTURE SHALL BE PROVIDED WITH INTEGRAL EMERGENCY 90 MINUTE BATTERY PACK.	1-5
G	HE WILLIAMS - 7SS-4-L65-8-40-DMA-DIM-UNV	INTEGRAL LED	43	6500	UNV	80	4000	0-10V / 10%	WHITE	LED LINEAR RIGID STEM MOUNTED.	1-5
GE	HE WILLIAMS - 7SS-4-L65-8-40-DMA-EM/10WLP-DIM-UNV	INTEGRAL LED	43	6500	UNV	80	4000	0-10V / 10%	WHITE	LED LINEAR RIGID STEM MOUNTED. FIXTURE SHALL BE PROVIDED WITH INTEGRAL EMERGENCY 90 MINUTE BATTERY PACK.	1-5
S	SATCO S21517	INTEGRAL LED	19	1250	UNV	80	4000	0-10V / 10%	WHITE	9" SQUARE SURFACE MOUNT WET RATED EXTERIOR CANOPY FIXTURE.	1-5
X1	SURELITE SLX70RWH	INTEGRAL LED	1	-	UNV	NA	NA	NA	ARCHITECT TO CONFIRM	LED EXIT LIGHT FIXTURE WITH BATTERY PACK, RED LETTERS AND FIELD CONFIGURED ARROWS.	1-5
X1EM	SURELITE SLX70RWH	INTEGRAL LED	10.3	-	UNV	NA	NA	NA	ARCHITECT TO CONFIRM	COMBINATION EMERGENCY EGRESS /SINGLE FACE LED EXIT LIGHT FIXTURE WITH BATTERY PACK, RED LETTERS AND FIELD CONFIGURED ARROWS.	1-5

NOTES:
1. COORDINATE ALL LIGHT FIXTURE SELECTIONS AND/OR SUBSTITUTIONS WITH ARCHITECT, OWNER AND/OR ENGINEER PRIOR TO ORDER.
2. PROVIDE LIGHTING CONTROLS THAT ARE COMPATIBLE WITH FIXTURES PROVIDED.
3. COORDINATE WITH ARCHITECT, OWNER AND/OR ENGINEER FOR DIMMING REQUIREMENTS PRIOR TO INSTALLATION.
4. PROVIDE ALL COMPONENTS AND ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION.
5. EQUIVALENTS MUST BE SUBMITTED AND APPROVED PRIOR TO BID.

LIGHTING CONTROL DEVICE SCHEDULE

TAG	MANUFACTURER AND MODEL SERIES	SENSOR DESCRIPTION	COVERAGE AREA (WxD OR RADIUS Ø)	VOLTAGE	MODE SETTINGS	TIME DELAY	DEVICE FINISH COLOR	SENSOR NOTES
WALL SWITCH OCCUPANCY SENSORS								
OS	WATTSTOPPER PW-301	SINGLE-RELAY PASSIVE INFRARED OCCUPANCY SENSOR WALL SWITCH WITH MANUAL OVERRIDE BUTTON.	MAJOR 30' x 35' MINOR 15' x 20'	120/277V	MANUAL ON AUTO OFF	5 MIN	WHITE	1
OSF	WATTSTOPPER PW-XX	SINGLE-RELAY PASSIVE INFRARED OCCUPANCY SENSOR WALL SWITCH WITH MANUAL OVERRIDE BUTTON. FAN/LIGHTING CONTROL	MAJOR 30' x 35' MINOR 15' x 20'	120/277V	AUTO ON AT 50% AUTO OFF	5 MIN	WHITE	1
CEILING MOUNTED DAYLIGHT / OCCUPANCY SENSORS								
OS	WATTSTOPPER LMDC-100	CEILING MOUNT ULTRASONIC DIGITAL OCCUPANCY SENSOR. 360 DEGREE COVERAGE. PLUG-AND-PLAY CONFIGURATION, (2) RJ45 PORTS, LCD DISPLAY, IR RECEIVER, CONFIGURATION BUTTONS.	ULT MAJOR 25' X 25' PIR 32' Ø	24V	-	20 MIN	WHITE	2
POWER SUPPLIES/ROOM CONTROLLERS								
DRC1	WATTSTOPPER LMRC-211	DIGITAL SINGLE-RELAY ON/OFF/DIMMING ROOM CONTROLLER. 0-10V DIMMING. MAXIMUM 20A TOTAL LOAD RATING. PLUG-AND-PLAY CONFIGURATION, (4) RJ45 PORTS, LED STATUS INDICATORS, CONFIGURATION BUTTONS, PLENUM RATED.	-	120/277V LOAD, 24VDC CONTROL OUTPUT	AUTO ON AT 50%, AUTO OFF	-	-	
LOW VOLTAGE SWITCHES								
LVD	WATTSTOPPER LMDM-101	DIGITAL DIMMING WALL SWITCH.	-	24VDC	-	-	WHITE	2,3,4
LIGHTING CONTROL PANEL								
LCP1	LEGRAND LP8S-8-G-115	8 RELAY CONTROL PANEL WITH DIGITAL TIME CLOCK	-	120V	-	-	-	

GENERAL NOTES:
A. SENSOR LAYOUT BASED ON WATTSTOPPER COVERAGE PATTERNS. ADJUST QUANTITIES AND LOCATIONS FOR ALTERNATE MANUFACTURERS LISTED BELOW PER MANUFACTURER SPECIFIC SPACING
B. nLIGHT, SENSOR SWITCH, COOPER-GREENGATE, CRESTRON, HUBBELL BUILDING AUTOMATION, AND LEVITON ARE CONSIDERED EQUIVALENT MANUFACTURES FOR SUBMISSION AS AN APPROVED MANUFACTURER, CONTINGENT ON LISTINGS APPROPRIATE FOR THE APPLICATION.
C. DURING SHOP DRAWINGS, PROVIDE LIGHTING PLANS SHOWING LOCATION, MOUNTING HEIGHT, ORIENTATION AND COVERAGE AREAS FOR EACH OCCUPANCY SENSOR FOR REVIEW AND APPROVAL BY ENGINEER. ALSO INCLUDE ON PLANS OTHER CEILING MOUNTED SYSTEMS, SHOWING COORDINATION WITH CEILING DEVICES INCLUDING BUT NOT LIMITED TO HVAC SUPPLY AND RETURN GRILLES,
D. PROVIDE ALL SENSORS BY THE SAME MANUFACTURER.
E. PROVIDE COPIES OF SENSOR AND POWER SUPPLY OPERATION INSTRUCTIONS TO OWNER.
F. PROVIDE WALL SWITCH AND CEILING SENSORS WITH AN ADJUSTABLE TIME DELAY RANGE OF 0-30 MIN, UNO.
G. DO NOT INSTALL LINE VOLTAGE SENSORS ON GFCI PROTECTED CIRCUITS.
H. FIELD-SET DEVICES TO THE ON MODE INDICATED IN TABLE, DISABLE ANY VISABLE/AUDIBLE ALERT SETTINGS, AND SET SENSITIVITIES TO MAXIMUM LEVELS.
I. PROVIDE ALL LOW VOLTAGE WIRING BETWEEN SENSORS, DEVICES, AND POWER SUPPLIES AS REQUIRED AND PER MANUFACTURER RECOMMENDATIONS.
J. WHERE OCCUPANCY SENSORS USE BOTH PIR AND ULTRASONIC TECHNOLOGIES, PROGRAM OFF MODES (MAINTAIN OCCUPANCY AND RE-TRIGGER) TO TRIGGER ON A SIGNAL FROM EITHER
K. WHERE MULTIPLE LOW VOLTAGE SWITCHES ARE CONNECTED WITHIN THE SAME SPACE, PROGRAM THE SWITCHES TO CONTROL THE LIGHTING IN THE EXACT SAME MANNER, UNO.

SENSOR NOTES:
1. CONNECT NEUTRAL CONDUCTOR TO SENSOR.
2. PROVIDE CUSTOM BUTTON ENGRAVING PER ENGINEER'S DIRECTION.
3. PROVIDE POWER SUPPLY WITH UNSWITCHED HOT CONDUCTOR CONNECTION. COORDINATE DEVICE LOCATIONS IN FIELD.
4. +A1:J50 NUMBER DENOTES HOW MANY SWITCHES NEEDED FOR CONTROL (1) DIMMING SWITCH PER FIXTURE TYPE IN AREA.

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10/22/2021

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CRASHCHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
	FOR PERMIT	10 / 22 / 21

PROJECT NUMBER 21009
DATE ISSUED: 10 / 22 / 21

SHEET NUMBER
E4.0

ELECTRICAL SCHEDULES

PANELBOARD MDP

		BUS AMPS:	800A			LOCATION:	STORAGE A106			GROUND BUS:	YES						
		MAIN SIZE / TYPE:	MCB			NEMA RATING:	NEMA 1			ISOL. GROUND BUS:	NO						
		VOLTS/PHASE:	208Y/120V, 3PH, 4W			AFC VALUE:	FIELD VERIFY #1			FEED THRU LUGS:	NO						
NOTES		MOUNTING:	SURFACE			AIC RATING:	65,000			SECTIONS:	1 OF 1						NOTES

CKT #	CIRCUIT DESCRIPTION	BREAKER AMPS	P	WIRE SIZE	LOAD (VA)	CONNECTED PER PHASE (VA) A	B	C	LOAD (VA)	WIRE SIZE	BREAKER P	BREAKER AMPS	CIRCUIT DESCRIPTION	CKT #
1					40,034	40,034			0					2
3	PANEL "P1"	600	3	O.L.	43,126		48,176		5,050					4
5					45,168			50,218	5,050	#8	3	50	RTU-1	6
7					4,810	9,860			5,050					8
9	VEHICLE LIFT	50	3	#8	4,810		13,220		8,410					10
11					4,810			13,220	8,410	#3	3	100	AIR COMPRESSOR	12
13					0	8,410			8,410					14
15	SPACE				0		2,400		2,400					16
17					0			2,400	2,400	#10	3	30	RTU-2	18
19					0	2,400			2,400					20
21	SPACE				0		0		0					22
23					0			0	0				SPACE	24
25					0	0			0					26
27	SPACE				0		0		0					28
29					0			0	0				SPACE	30
31					0	0			0					32
33	SPACE				0		0		0					34
35					0			0	0				SPACE	36
37					0	0			0					38
39	SPACE				0		0		0					40
41					0			0	0					42
	PER PHASE SUB-TOTALS				60,704	63,796		65,838	LEGEND:					

TOTAL CONNECTED PANELBOARD (VA)	190,338	LCP1- VIA LIGHTING CONTROL PANEL
TOTAL CONNECTED PANELBOARD (AMPS)	528	GFCI - GROUND FAULT CURRENT INTERRUPTER
TOTAL PANELBOARD DEMAND (VA)	187,612	EX - EXISTING
TOTAL PANELBOARD DEMAND (AMPS)	521	OL - RE: ONE-LINE DIAGRAM

GENERAL NOTES:

1. CONFIRM FAULT CURRENT RATING WITH EVERY PRIOR TO ORDERING EQUIPMENT.

WP - WEATHER PROOF ENCLOSURE

PANELBOARD P1

		BUS AMPS:	600A			LOCATION:	STORAGE A106			GROUND BUS:	YES						
		MAIN SIZE / TYPE:	MLO			NEMA RATING:	NEMA 1			ISOL. GROUND BUS:	NO						
		VOLTS/PHASE:	208Y/120V, 3PH, 4W			AFC VALUE:	FIELD VERIFY #1			FEED THRU LUGS:	NO						
NOTES		MOUNTING:	SURFACE			AIC RATING:	65,000			SECTIONS:	3						NOTES

	CKT #	CIRCUIT DESCRIPTION	BREAKER AMPS	P	WIRE SIZE	LOAD (VA)	CONNECTED PER PHASE (VA) A	B	C	LOAD (VA)	WIRE SIZE	BREAKER P	BREAKER AMPS	CIRCUIT DESCRIPTION	CKT #	
	1	RECEPT. - ELEC. ROOM	20	1	#12	180	430			250	#12	1	20	LIGHTING CONTROL PANEL 'LCP1'	2	
WP,GFCI	3	RECEPT. - EXTERIOR BLDG.	20	1	#12	360		720		360	#12	1	20	RECEPT. - SHOP	4	
	5	RECEPT. - SHOP	20	1	#12	360			2,960	2,600	#6	2	30	MIG/MAG WELDER	6	#2
	7					5,500	8,100			2,600					8	
#2	9	SPOT WELDER	60	3	#4	5,500		5,860		360	#12	1	20	RECEPT. - SHOP	10	
	11					5,500			6,600	1,100	#12	1	20	OVERHEAD DOOR	12	
	13	BIG ASS FAN - SHOP	20	1	#12	900	1,800			900	#12	1	20	BIG ASS FAN - SHOP	14	
	15	BIG ASS FAN - SHOP	20	1	#12	900		1,260		360	#12	1	20	RECEPT. - SHOP	16	
	17	RECEPT. - SHOP	20	1	#12	360			720	360	#12	1	20	RECEPT. - SHOP	18	
	19	RECEPT. - SHOP	20	1	#12	360	360			0					20	
#2	21	MIG/MAG WELDER	30	2	#6	2,600		8,100		5,500	#4	3	60	SPOT WELDER	22	#2
	23					2,600			8,100	5,500					24	
	25	RECEPT. - SHOP	20	1	#12	360	6,220			5,860	#12	1	20	RECEPT. - SHOP	26	
	27	RECEPT. - SHOP	20	1	#12	360		2,960		2,600	#6	2	30	MIG/MAG WELDER	28	#2
	29					5,500			8,100	2,600					30	
	31	SPOT WELDER	60	3	#4	5,500	5,860			360	#12	1	20	RECEPT. - SHOP	32	
	33					5,500		6,600		1,100	#12	1	20	OVERHEAD DOOR	34	
	35	BIG ASS FAN - SHOP	20	1	#12	900			1,260	360	#12	1	20	RECEPT. - SHOP	36	
	37	RECEPT. - SHOP	20	1	#12	360	1,460			1,100	#12	1	20	OVERHEAD DOOR	38	
	39	RECEPT. - SHOP	20	1	#12	1,080		1,800		720	#12	1	20	RECEPT. - SHOP	40	
	41	OVERHEAD DOOR	20	1	#12	900			900	0	#12	1	20	RECEPT - EXTERIOR BLDG.	42	WP, GFCI
	SECTION: 2															
	43	FRIG. - BREAKROOM	20	1	#12	1,000	1,900			900	#12	1	20	RECEPT. - GARBAGE DISPOSAL	44	GFCI
	45	MICROWAVE - BREAKROOM	20	1	#12	1,200		1,380		180	#12	1	20	RECEPT. - BREAKROOM	46	
	47	RECEPT. - RESTROOM	20	1	#12	360			720	360	#12	1	20	RECEPT. - BREAK/OFFICE	48	
	49	RECEPT. - JAN. CLOSET	20	1	#12	180	1,260			1,080	#12	1	20	RECEPT. - OFFICE	50	
	51	RECEPT. - OFFICE	20	1	#12	1,080		2,160		1,080	#12	1	20	RECEPT. - OFFICE	52	
	53	RECEPT. - OFFICE	20	1	#12	1,080			2,160	1,080	#12	1	20	RECEPT. - OFFICE	54	
	55	RECEPT. - COFFEE	20	1	#12	900	1,980			1,080	#12	1	20	RECEPT. - TV WAITING AREA	56	
	57	RECEPT. - COFFEE BAR AREA	20	1	#12	180		540		360	#12	1	20	RECEPT. - RESTROOMS	58	
WP,GFCI	59	RECEPT. - EXTERIOR BLDG.	20	1	#12	180			1,380	1,200	#12	1	20	EXTERIOR BLDG SIGN	60	LCP1
LCP1	61	EXTERIOR BLDG. SIGN	20	1	#12	1,200	1,380			180	#12	1	20	RECEPT. - EXTERIOR BLDG	62	WP, GFCI
	63	LTG - OFFICE	20	1	#12	1,200		2,400		1,200	#12	1	20	LTG- BREAK/RESTROOMS	64	
	65	LTG - SHOP	20	1	#12	1,200			2,400	1,200	#12	1	20	LTG - SHOP	66	
	67	LTG - SHOP	20	1	#12	1,200	2,400			1,200	#12	1	20	LTG - SHOP	68	
	69	LTG - SHOP	20	1	#12	1,200		2,400		1,200	#12	1	20	LTG - SHOP	70	
	71	LTG - SHOP	20	1	#12	1,200			1,350	150	#12	1	20	LTG- ELEC. ROOM	72	
LCP1	73	LTG - EXTERIOR BLDG	20	1	#12	1,200	2,400			1,200	EX	EX	EX	PYLON SIGNAGE	74	LCP1 #3
	75	SPARE	20	1		0		1,800		1,800	#12	1	20	UH-1	76	
	77	SPARE	20	1		0			1,032	1,032	#12	1	20	RT-5 / RT-7	78	
	79	SPARE	20	1		0	1,032			1,032	#12	1	20	RT-6 / RT-8	80	
	81	EF-5	20	1	#12	200		1,232		1,032	#12	1	20	RT-3 / RT -4	82	
	83	EF-3	20	1	#12	200			3,080	2,880	#10	1	30	EF-4	84	
	SECTION: 3															
	85	EF-2	20	1	#12	450	650			200	#12	1	20	EF-4 CONTROLLER	86	
	87	EF-1	20	1	#12	528		1,560		1,032	#12	1	20	RT-1 / RT-2	88	
	89	SPACE				0			1,872	1,872	#10	2	25	CU-1	90	
	91	SPACE				0	1,872			1,872					92	
	93	SPACE				0		104		104	#12	2	15	FCU-1	94	
	95	RECEPT. - RTU-1	20	1	#12	180			284	104					96	
	97	RECEPT. - RTU-2	20	1	#12	180	430			250	#12	1	20	FACP	98	
	99	WH-1	30	2	#10	2,250		2,250		0	--	--	--	SPACE	100	
	101					2,250			2,250	0	--	--	--	SPACE	102	
	103	RP-1	20	1	#12	500	500			0	--	--	--	SPACE	104	
	105	SPACE	--	--	--	0		0		0	--	--	--	SPACE	106	
	107	SPACE	--	--	--	0			0	0	--	--	--	SPACE	108	
	109	SPACE	--	--	--	0	0			0	--	--	--	SPACE	110	
	111	SPACE	--	--	--	0		0		0	--	--	--	SPACE	112	
	113	SPACE	--	--	--	0			0	0	--	--	--	SPACE	114	
	115	SPACE	--	--	--	0	0			0	--	--	--	SPACE	116	
	117	SPACE	--	--	--	0		0		0	--	--	--	SPACE	118	
	119	SPACE	--	--	--	0			0	0	--	--	--	SPACE	120	
	121	SPACE	--	--	--	0	0			0	--	--	--	SPACE	122	
	123	SPACE	--	--	--	0		0		0	--	--	--	SPACE	124	
	125	SPACE	--	--	--	0			0	0	--	--	--	SPACE	126	
		PER PHASE SUB-TOTALS					40,034	43,126	45,168	LEGEND:						

TOTAL CONNECTED PANELBOARD (VA)	128,328	LCP1- VIA LIGHTING CONTROL PANEL
TOTAL CONNECTED PANELBOARD (AMPS)	356	GFCI - GROUND FAULT CURRENT INTERRUPTER
TOTAL PANELBOARD DEMAND (VA)	125,602	EX - EXISTING
TOTAL PANELBOARD DEMAND (AMPS)	349	OL - RE: ONE-LINE DIAGRAM

GENERAL NOTES:

1. CONFIRM FAULT CURRENT RATING WITH EVERY PRIOR TO ORDERING EQUIPMENT.
2. CONFIRM LENGTH OF CIRCUIT NEEDED TO SIZE WIRE. SIZE SHOWN IS LONGEST LENGTH SIZE PER MANUFACTURER RECOMMENDATIONS.
3. FIELD VERIFY PYLON SIGNAGE POWER REQUIREMENTS PRIOR TO ORDERING CIRCUIT BREAKER. NOTIFY ENGINEER OF DISCREPANCIES.

WP - WEATHER PROOF ENCLOSURE

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Kansas City, MO 64105
Missouri COA: 2017040776
913-689-9449
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STATE OF MISSOURI
SCOTT D. GROSHANS
NUMBER PE-2019012798
PROFESSIONAL ENGINEER
SCOTT D. GROSHANS
LICENSE # PE-2019012798
10/22/2021

ROSE DESIGN GROUP INC
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913-782-0777 FAX: 913-782-0998
P.O. BOX 100 OLATHE, KS 66051
MISSOURI STATE CERTIFICATE OF AUTHORITY # 2008034845 www.BuildWithRose.com

CRASH CHAMPIONS COLLISION REPAIR TEAM

PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

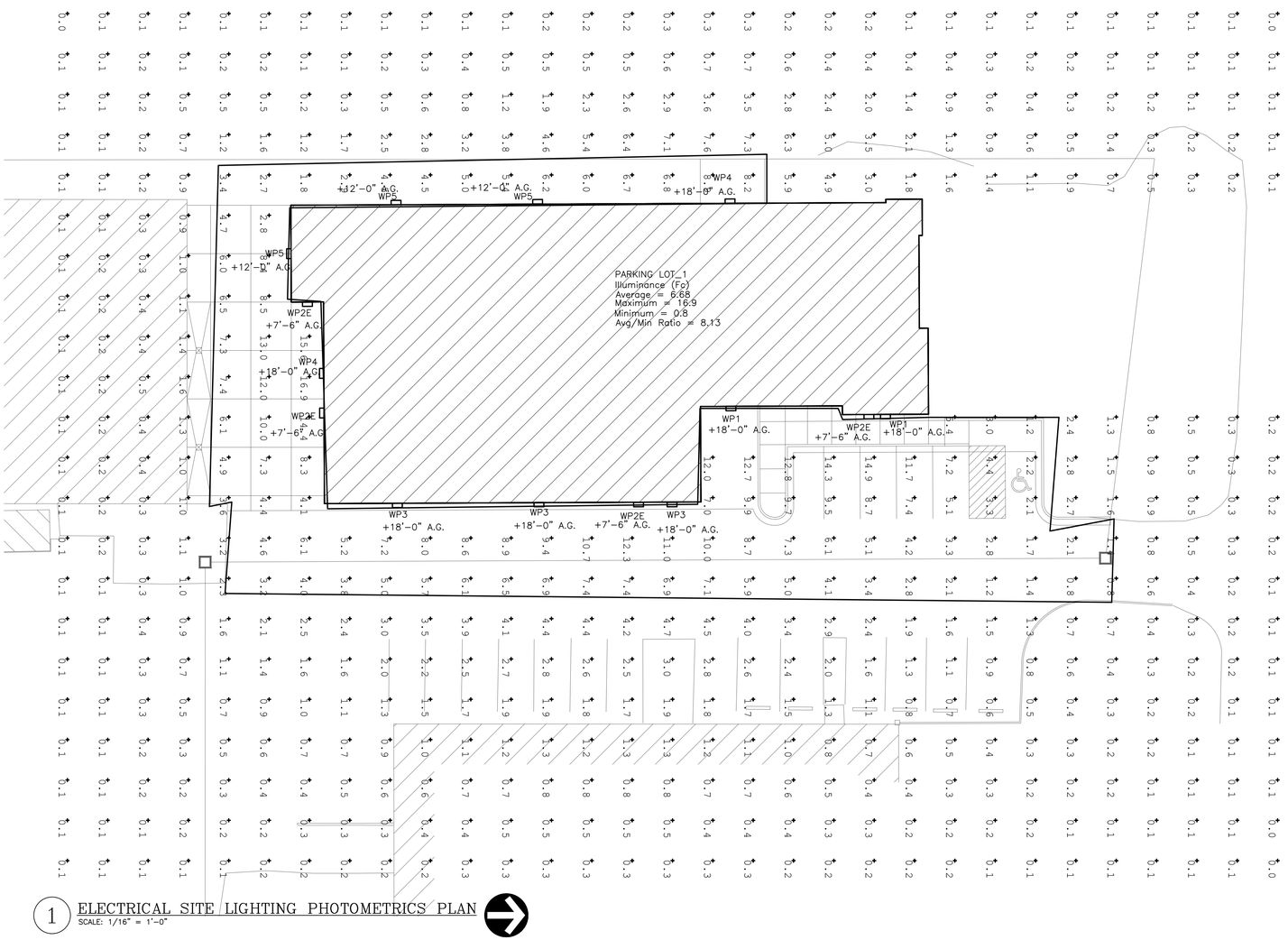
NO.	DESCRIPTION	DATE
	FOR PERMIT	10 / 22 / 21

PROJECT NUMBER 21009
DATE ISSUED: 10 / 22 / 21

SHEET NUMBER
E4.1

ELECTRICAL SCHEDULES

Oct 22, 2021 - 10:35am - USER Scott Groshans
C:\Users\Scott Groshans\Dropbox (5by5 Engineers)\5BY5 ACTIVE PROJECTS\202100051 Crash Champions Lees Summit - Rose\Base-CAD\202100051 ELEC.dwg
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1 ELECTRICAL SITE LIGHTING PHOTOMETRICS PLAN
SCALE: 1/16" = 1'-0"

ELECTRICAL GENERAL NOTES:

- REFER TO SHEET E3.0 FOR ELECTRICAL GENERAL NOTES.

ELECTRICAL GENERAL DEMOLITION NOTES:

- DEMO WORK MUST BE COMPLETED PER PHASE. CONFIRM CIRCUITS TO REMAIN FOR PHASE II TO BE FULLY OPERATIONAL DURING DEMO WORK OF PHASE I.
- REMOVE ALL INTERIOR ELECTRICAL DEVICES INCLUDING ALL CONDUIT AND WIRING BACK TO SOURCE OR NEAREST DOWNSTREAM DEVICE TO REMAIN. (U.N.O.) REFERENCE SHEET E3.0–1 DEMO ELECTRICAL RISER DIAGRAM FOR FURTHER INFORMATION.
- ABANDON ALL EXISTING FLOOR BOXES IN PLACE.
- REFER TO SHEET E3.0 FOR ADDITIONAL ELECTRICAL GENERAL DEMOLITION NOTES AND ELECTRICAL GENERAL NOTES.

⊖ ELECTRICAL SITE LIGHTING PHOTOMETRIC PLAN NOTES:

1. PHOTOMETRICS ARE CALCULATED REFERENCING IES FILES OF SPECIFIED LIGHT FIXTURES ON SCHEDULE. ANY LIGHT FIXTURE ALTERNATIVES AS WELL AS MOUNTING HEIGHTS MAY DIFFER IN PHOTOMETRIC SUMMARY AND SHALL BE CALCULATED AS REQUIRED.
2. POLE MOUNTED LIGHT FIXTURE. PROVIDE WITH 20'–0" STEEL SQUARE POLE. POLE SHALL BE PROVIDED WITH A HARMONIC DAMPNER. PROVIDE AND INSTALL POLE PER LIGHT FIXTURE MANUFACTURER RECOMMENDATIONS. REFERENCE LIGHT POLE BASE ON THIS SHEET DETAIL 2. CONFIRM FINISH COLOR WITH ARCHITECT PRIOR TO ORDERING. REFERENCE LIGHT FIXTURE SCHEDULE ON THIS SHEET FOR FURTHER INFORMATION.
3. ALL FIXTURES TO BE INSTALLED IN GENERAL LOCATION SHOWN. COORDINATE WITH ALL TRADES PRIOR TO INSTALL.

SITE LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER AND MODEL #	LIGHT SOURCE	WATTS	MINIMUM LUMENS	VOLTAGE	CRI	COLOR TEMP	DIMMABLE	FINISH	DESCRIPTION	NOTES
WP1	MCGRAW EDISON - GLEON-SA3D-740-U-SL4	INTEGRAL LED	191	22,500	UNV	80	4000	NA	DARK BRONZE	LED ARCHITECTURAL SITE WALL MOUNTED FIXTURE. MOUNT AT 18'-0" A.G.	1-5
WP2E	MCGRAW EDISON - IST-SA1-E-740-U-T4FT-XX-CBP	INTEGRAL LED	25	2200	UNV	80	4000	NA	DARK BRONZE	EXTERIOR LED WALL PACK. FIXTURE SHALL BE PROVIDED WITH INTEGRAL EMERGENCY 90 MINUTE BATTERY PACK.	1-5
WP3	MCGRAW EDISON - GLEON-SA3A-740-U-SL4	INTEGRAL LED	96	13,500	UNV	80	4000	NA	DARK BRONZE	LED ARCHITECTURAL SITE WALL MOUNTED FIXTURE .	1-5
WP4	MCGRAW EDISON - GLEON-SA3D-740-U-SL2-HSS	INTEGRAL LED	191	19,600	UNV	80	4000	NA	DARK BRONZE	LED ARCHITECTURAL SITE WALL MOUNTED FIXTURE. PROVIDE WITH HOUSE SHIELD.	1-5
WP5	MCGRAW EDISON - GLEON-SA1A-740-U-SL2-HSS	INTEGRAL LED	34	4,000	UNV	80	4000	NA	DARK BRONZE	LED ARCHITECTURAL SITE WALL MOUNTED FIXTURE. PROVIDE WITH HOUSE SHIELD.	1-5

NOTES:
1. COORDINATE ALL LIGHT FIXTURE SELECTIONS AND/OR SUBSTITUTIONS WITH ARCHITECT, OWNER AND/OR ENGINEER PRIOR TO ORDER.
2. PROVIDE LIGHTING CONTROLS THAT ARE COMPATIBLE WITH FIXTURES PROVIDED.
3. COORDINATE WITH ARCHITECT, OWNER AND/OR ENGINEER FOR DIMMING REQUIREMENTS PRIOR TO INSTALLATION.
4. PROVIDE ALL COMPONENTS AND ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION.
5. EQUIVALENTS MUST BE SUBMITTED AND APPROVED PRIOR TO BID.

STATE OF MISSOURI
SCOTT D. GROSHANS
NUMBER
PE-2019012798
PROFESSIONAL ENGINEER
SCOTT D. GROSHANS
LICENSE # PE-2019012798
10/22/2021

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P.O. BOX 100 OLATHE, KS 66051
MISSOURI STATE CERTIFICATE OF AUTHORITY # 2008034845 www.BuildWithRose.com

CRASHCHAMPIONS COLLISION REPAIR TEAM

PROPOSED BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
	FOR PERMIT	10 / 22 / 21

PROJECT NUMBER 21009
DATE ISSUED: 10 / 22 / 21
SHEET NUMBER
ES1.0

5BY5 ENGINEERS
1100 Main Street, 4th Floor
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ELECTRICAL SITE LIGHTING PHOTOMETRICS

Oct 22, 2021 – 10:35am – USER: Scott Groshans
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